

Occupational Health and Safety and Fire Protection training for newly admitted students 2019/2020

Training for:

***NEWLY ADMITTED STUDENTS OF THE FACULTY OF:
MEDICINE
OF WROCLAW MEDICAL UNIVERSITY***

Form of training:

CLASSES

Introduction

I present to you the training materials on occupational health and safety for newly admitted students of Wrocław Medical University.

Legal basis

The training is carried out based on the following provisions:

- *Regulation of the Minister of Science and Higher Education of 7 July 2007 on occupational health and safety at universities.*

Organisation of training

The organiser of the training is Wrocław Medical University.

The training is completed with a written exam.

Exam questions relate to topics connected with the presented material.

Objective of training

The objective of the training is to comply with the provisions of the Regulation of the Minister of Science and Higher Education of 7 July 2007 on occupational health and safety at universities, and in particular to transfer and supplement the knowledge and skills in the field of:

- *selected legal issues,*
- *information on life and health hazards and protection against them,*
- *protecting the students against hazards related to their studies,*
- *procedure in case of accidents and emergencies.*

Selected legal provisions of labour law relating to occupational health and safety.

Definitions:

Safety

As a word, the term "safety" means a state of peace or lack of threat. It is a state that causes both a sense of no threat and an actual lack of threat. Occupational health and safety is a branch of labour protection which aims to prevent accidents at work and ensure harmless working conditions. Occupational safety is

defined not only by law, but also by knowledge and life experience as well as scientific and technological achievements, which constitute non-legal rules.

Occupational Health

Occupational health (work hygiene) is a set of conditions that have a positive effect on human health. Hygiene is a branch of medicine that deals with the conditions for improving the health of individuals and societies and examining the impact of such external factors as water, light, etc. on human health. For the purposes of labour protection, occupational health will mainly consist in ensuring that labour is performed under conditions that comply with applicable standards in relation to external factors (noise, vibration, light intensity or order at the workplace) and in relation to internal factors (general health of the employee and their psychophysical state).

Labour protection

Labour protection is a set of legal provisions regulating working conditions in order to protect human life and health in the work environment, as well as the interests of employees. The objective of labour protection is first and foremost to protect the employee from dangers related to the work he or she performs by providing appropriate working conditions.

Legal basis:

REGULATION

OF THE MINISTER OF LEARNING AND HIGHER EDUCATION

of 30 October 2018

on the manner of providing safe and hygienic working and learning conditions at universities.

Pursuant to Art. 51 section 2 of the Act of 20 July 2018 – Law on Higher Education and Science (Journal of Laws, items 1668 and 2024) it is hereby ordered as follows:

Art. 1

1. As part of enduring safe and hygienic working and learning conditions at the university, the Rector:

1) analyses and identifies health and life hazards, evaluates and documents the risk related to work and learning at the university as a result of performing the tasks of the university, and takes preventive measures to reduce the risk;

2) cooperates with bodies in matters of occupational health and safety competent and with trade unions representing the university staff, the students' union and the PhD students' union within the scope specified in point 1;

3) analyses the circumstances and causes of accidents related to work and learning at the university;

4) defines the main directions of activities in the field occupational and learning for working and learning at the university;

5) defines the manner of making available and using the university's infrastructure, including its technical equipment;

6) specifies the method of organising sporting, cultural and entertainment events taking place within the premises of the university which are not mass events within the meaning of Art. 3 point of the Act of 20 March 2009 on the Safety of Mass Events (Journal of Laws of 2018, item 1870).

2. The Rector shall ensure that the results of the analyses specified in Section 1 (1)(3) are taken into account in the process of organising work and education at the university.

Art. 2

As part of the fulfilment of obligations concerning the provision of safe and hygienic working and learning conditions at the university, the Rector shall ensure:

1) that the following are placed in visible places inside university buildings:

a) information on how to use the university premises and technical equipment in a safe and hygienic manner, and how to proceed in case of an accident or malfunction;

b) evacuation plans for people inside university building and signage marking the escape routes;

2) providing information specified in point 1(a) on the university website, in addition to information about the manner of:

- a) proceeding in cases of an imminent health or life hazard, including in particular the emergency phone number at the university premises and the e-mail address at which information about these hazards should be reported;
- b) documenting a reported or identified threat and the manner of its removal or taking measures to prevent that threat.

Art. 3

1. The Rector provides at least 4 hours of mandatory training on safe and hygienic learning conditions for students and PhD students starting their education at the university, in a scope that takes into account the specificity of university education and the type of technical equipment used in the learning process..
2. The Rector provides training on safe and hygienic learning conditions for post-graduate students, participants in specialist courses and other forms of education if it is necessary in order to conduct the classes within these studies or courses in a safe manner. If the obligation to conduct the training does not result from the curriculum of a given form of education, the Rector shall decide whether it is necessary to conduct it.
3. Training on safe and hygienic learning conditions is carried out in particular in the form of lectures. Completion of the training is confirmed in the student's periodic report cards or in documentation related to the implementation of a given form of education.

Art. 4

When planning university investments and the modernisation and renovation of university facilities, the Rector shall take into account the results of the analyses specified in Art. 1 Section 1 (1)(3) in the scope of ensuring safe and hygienic working and learning conditions.

Art. 5

1. The Rector shall ensure that:

- 1) compliance with health and safety requirements for working and learning at the university is monitored;
 - 2) escape routes within the premises of the university are kept in a state that does not pose threats to their users;
 - 3) the state of university premises and technical equipment is inspected in terms of health and safety for working and learning;
 - 4) in university buildings, the lighting, ventilation, heating and floor space conditions meet the requirements specified in the regulations issued under Art. 237¹⁵ Section 1 of the Act of 26 June 1974 – Labour Code (Journal of Laws of 2018, items 917, 1000, 1076, 1608 and 1629);
 - 5) classes in workshops, studios and laboratories as well as physical education classes are conducted by persons trained in the field of first aid;
 - 6) records are kept for accidents in which PhD students, post-graduate students, participants in specialists courses and other forms of education within university premises or in relation with following the course curriculum;
 - 7) classes at the university are conducted under the supervision of a person authorised to conduct these classes, with appropriate preparation to guarantee that the classes are conducted in accordance with the rules and regulations of occupational health and safety.
2. If a life or health hazard is identified while using the university's premises or technical equipment, the Rector shall prohibit their use and order the removal of the identified hazard.
 3. The premises or technical equipment specified in Section 2 may be re-authorised for use once the hazard is confirmed to have been removed.
 4. If the state of threat to health or life occurs or becomes identified in class, the class shall be immediately interrupted, and if necessary, the premises at risk shall be vacated in accordance with the evacuation plan.
 5. In the event that the conditions specified in Section 1 (4) pose a threat to health or life, the Rector shall temporarily suspend classes in these rooms.

Art. 6

The Rector shall ensure that:

- 1) premises restricted for unauthorised persons are marked and secured;
- 2) the principles of ergonomics are taken into account when organising and equipping the work stands and learning rooms;

- 3) *the needs of disabled persons are taken into account when organising and equipping the work stands and learning rooms;*
- 4) *the university premises are maintained in proper sanitary condition;*
- 5) *the university premises in which classes are conducted are equipped with first aid kits which contain the necessary first aid items along with instructions on administering first aid.*

Art. 7

The Rector shall ensure that:

- 1) *technical equipment and appliances are maintained in a condition which ensures full efficiency of their operation and safety for work and learning;*
- 2) *protection is provided against the start-up of faulty or damaged technical equipment and appliances, in addition to clear and visible marking of such equipment and appliances;*
- 3) *users are provided with instructions on the safe use of technical equipment and appliances;*
- 4) *safety and hygiene instructions for classes involving the use of technical equipment and devices are placed in a conspicuous place within the room;*
- 5) *participants of classes conducted in a workshop, laboratory and studio are equipped with the necessary personal protection measures against hazardous or harmful substances used during classes;*
- 6) *a person conducting classes with the use of technical equipment and devices provides the participants with practical knowledge on the rules and methods of work to ensure safety during class activities.*

Art. 8

1. *Chemical substances used at the university shall be placed in suitable containers labelled with the names of substances and information about their dangerous or harmful effect on health.*
2. *Hazardous substances and hazardous mixtures as defined in regulations on chemical substances and their mixtures shall be stored in closed rooms specially adapted for the purpose.*
3. *The Rector shall ensure that material safety data sheets for hazardous substances and hazardous mixtures used in education or scientific activities are made available to persons conducting classes with the use of these substances.*
4. *The person conducting the classes specified in Section 3 shall make their participants familiar with the material safety data sheets for hazardous substances and hazardous mixtures and with information on their dangerous or harmful effects on health and the necessary precautions.*

Art. 9

Rectors shall adjust the working and learning conditions at the university to meet the requirements specified in Art. 1 Section 1 (5)(6), Art. 2, Art. 3, Art. 6 by 1 March 2019.

Art. 10

The regulation shall come into force on the day following the day of its announcement.

Fire protection:

A fire hazard is a set of factors affecting the occurrence and spread of fire, and thus the level of safety for life.

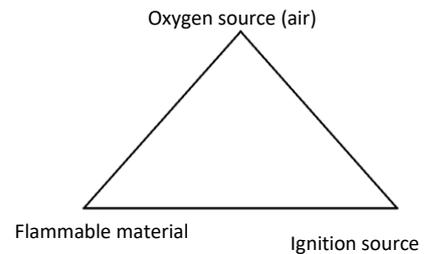
Explosive hazard:

An explosive hazard is the possibility of formation of mixtures with air by flammable gases, flammable liquid vapours and dust or fibres which explode under the influence of an ignition initiator, i.e. undergo rapid combustion combined with a sudden increase in pressure.

Fire triangle:

Three factors are necessary for a fire to occur

1. Flammable material
2. Oxygen
3. Ignition source (thermal stimulus, source of heat)



Causes of fire:

Man-made, resulting from:

- ◆ Carelessness
- ◆ Negligence
- ◆ Ignorance and non-compliance with fire regulations
- ◆ Intentional arson

Natural:

Thermal impact of solar rays on combustible materials through glass lightning, etc.

Fires in buildings pose a serious threat to human life and health. Fire is also a serious threat to valuable room equipment.

The most common causes of a fire include:

- ◆ Leaving smouldering cigarettes and matches in places containing flammable materials
- ◆ Use of makeshift electrical systems
- ◆ Placing electric heating devices (ovens, radiators, kettles) in the immediate vicinity of room equipment made of combustible materials (furniture, curtains, fitted carpets, etc.).
- ◆ Excessive overload of the electrical system
- ◆ Forgetting to unplug electric energy receivers which are not intended for continuous operation
- ◆ Improper handling and carelessness when using flammable materials
- ◆ Improper protection of rooms against access by unauthorised persons
- ◆ Use of combustible materials as covers for sources of light
- ◆ Inadequate or excessive maintenance of electrical equipment and systems
- ◆ Failure to observe precautions during fire-hazard work (welding, defrosting, using a i renovation, etc.)
- ◆ Careless handling of flammable liquids in laboratory rooms.

Fire classes

Fire classes

Breakdown of flammable materials into fire classes:

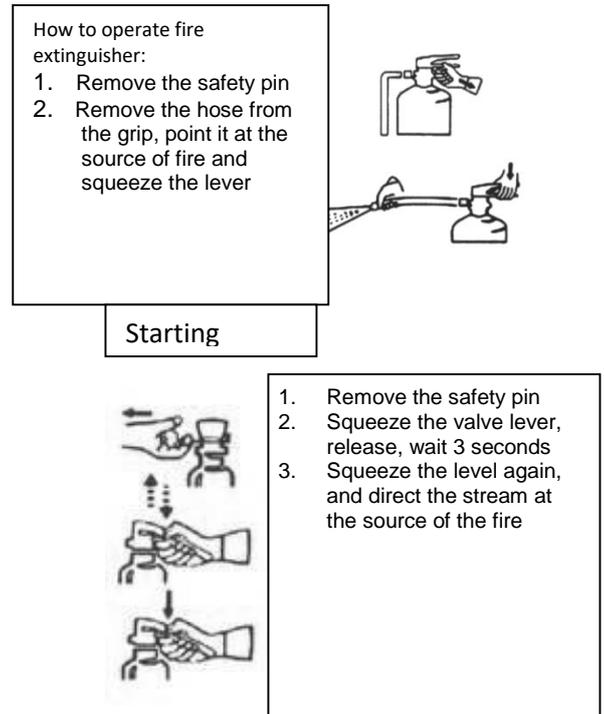
A	fires of solids of organic origin in which the phenomenon of incandescence accompanies other phenomena occurring in the process of burning. e.g. wood, paper, coal, plastics, fabrics, stoma		C	gas fires e.g. methane, acetylene, propane, hydrogen city gas	
B	B fires of flammable liquids and solid substances that melt when heated during fire, e.g. petrol, alcohols, acetone, oils, varnishes, greases, paraffin, stearin, pack, pitch, naphtalene, tar		D	metal fires e.g. magnesium, sodium, uranium, aluminum gas	
			F	Fires of cooking oils and fats	



Fire extinguishers marked with appropriate letters (A, B, C, D) are intended for extinguishing a particular class of fire. The type of extinguisher available in a room must be appropriate for the type of material which may be ignited.

According to the way in which the expellants of the fire-extinguishing agents are stored, we also categorise fire extinguishers as:

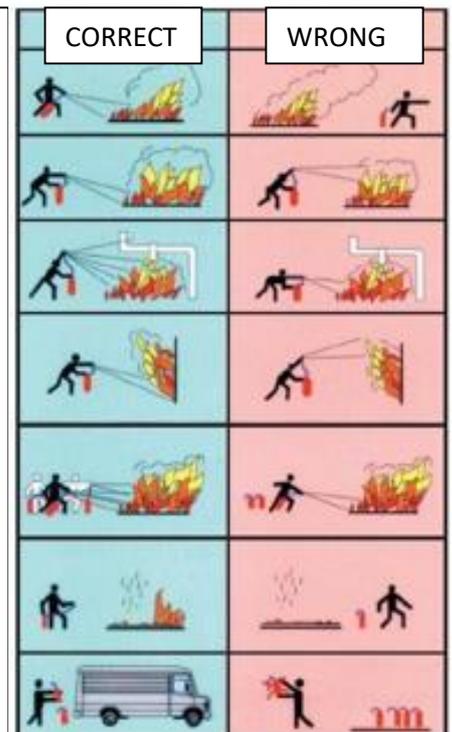
type X – fire extinguishers under constant pressure, the expellant and the fire-extinguishing agent are located in the same cylinder. The principle of launching a fire extinguisher of this type is presented in the drawing



type Z – fire extinguishers in which the expellant is located in a separate cylinder, also known a cartridge. Fire extinguishers of this type are launched in the following way:

Basic principles of extinguishing fire using fire extinguishers

1. Approach the fire in the direction of the wind (the wind blowing in your back).
2. Start the extinguisher (in accordance with the manual) and direct the stream of the extinguishing agent at the source of the fire
 - a) in the case of burning horizontal surfaces, the extinguishing stream should be directed at the burning surface from its closest edge, and the stream should be almost parallel to the burning surface.
 - b) burning drops falling from the top or leaking flammable liquid should be extinguished directing the extinguishing stream upwards.
 - c) vertical surfaces should be extinguished from the top to the bottom.
3. If more fire extinguishers are necessary to put out the fire, they all should be used simultaneously.
4. After extinguishing the fire, make sure that no reignition occurs.
5. After an extinguisher is used it should be taken to the workshop



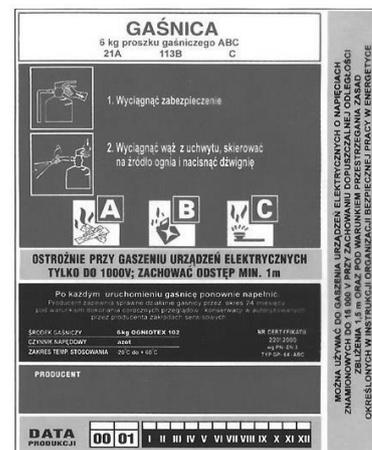
Each fire extinguisher features a descriptive label, with the most important information concerning:

- details of the extinguishing agent used,
- volume of the fire extinguisher,
- designation of the fire class for which the extinguisher is intended,

- operating instructions in the form of drawings and descriptions,
- information on the capacity to extinguish live devices.

The extinguishing agent which fills the cylinder of an extinguisher may be:

- fire-extinguisher powder – P
- fire-fighting foam – W
- carbon dioxide – S



Procedures in the event of fire hazards

In the event that a fire or signs of a fire are detected, it is imperative to stay calm, not to cause panic, immediately press the manual call point (Polish: ROP – if there is one within the building) and immediately **alert** (inform):

- the people in the part of the building at risk — **begin evacuation if necessary**,
- the head of the organisational unit managing the building, or another officer who notifies the Rector or the acting Vice-Rector and Chancellor,
- the doorkeeper,
- security,
- the National Fire Service (if necessary).

If a fire is signalled by the fire alarm system, the person appointed by the building manager locates the alarm site to confirm whether a threat has occurred. Once the threat is confirmed, the person managing the building – the manager – or another officer is required to alert the **National Fire Service** by performing the following actions:

- call **998** or **112**, and once the dispatcher picks up, provide comprehensible information on:
 - where the fire has occurred (name of the building and its address),
 - what is burning,
 - whether there is a threat to human life (provide an approximate number of people),
 - how serious the fire situation is,
 - whether there are dangerous (explosive, toxic or flammable) materials in the vicinity of the fire,
 - how to reach the object,
 - provide his or her full name and the telephone number used to report the threat;
- once all the details have been provided, waiting for confirmation that information about the threat has been received by the emergency service dispatcher (refrain from moving away from the device used to report the threat and wait for a possible verification of the report's credibility),
- as long as it does not pose a threat to their life or health, employees who do not take part in the process of alerting about the threat must immediately begin fighting the fire by using the firefighting equipment available in the vicinity of the fire, bring firefighting equipment to the fire zone, and proceed to assist people at risk, help them evacuate and start evacuating the valuables.

If necessary, the following services should also be notified of the fire:

- **Emergency Ambulance Service telephone numbers 112, 999,**
- **Police telephone number 997,**
- **Energy Emergency Service telephone number 991,**
- **Gas Emergency Service telephone number 992,**
- **Emergency Plumbing Service telephone number 994,**
- **other services if necessary.**

Procedures after the announcement of evacuation

Responsibilities of the head of the building management unit

The head of the building management unit is directly responsible for the safety of persons and property during evacuation from a building at risk and is particularly obliged to:

- *determine how to proceed in the event of a fire or another local emergency and evacuation announcement,*
- *decide on the scope of evacuation after consultation with a Rector, Chancellor or Deputy,*
- *alert specialist emergency services or supervise the process of alerting them,*
- *prohibit people who do not participate in the rescue operation from entering the building,*
- *place information boards to mark the evacuation assembly points,*
- *ensure the safety and potential evacuation of people inside the building,*
- *ensure full accessibility of roads and emergency exits from the building,*
- *appoint teams of employees (persons) to evacuate people and property,*
- *after completing the evacuation, check whether everyone has left the building at risk,*
- *notify the management of the rescue operation (the University) that the evacuation has been completed,*
- *cooperate with the specialist emergency services (Fire Service, Police, Emergency Ambulance Service, Emergency Energy Service and Emergency Gas Service) during the rescue operation;*
- *commence practical training in the field of evacuating people and property from the building.*

Evacuation duties of employees, students and other people continuously using the University facilities

Employees, students and other people who continuously use the University facilities are required to have accurate and current information on how to evacuate and raise the alarm, and the rules of conduct after evacuation from the building has been announced.

During the evacuation, employees and students are particularly obliged to:

- *strictly adhere to the instructions of their superiors and people in charge of the evacuation;*
- *cease all activities and leave the danger zone – follow the escape routes,*
- *stay calm and make sure not to cause panic,*
- *proceed to perform the tasks assigned to them – this applies to persons assigned to activities for securing the evacuation,*
- *shut down the computer equipment and secure the IT data against unauthorised access,*
- *turn off and secure all electric and gas devices,*
- *prepare (secure) any important documentation and property for evacuation,*
- *close the windows,*
- *pick up their personal belongings and documents,*
- *leave the room, lock the door and leave the key in the lock from the outside;*
- *go to the evacuation assembly point after leaving the building at risk.*

		Evacuation assembly point E-24	The sign is placed in the area where people should assemble after the first stage of evacuation
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Evacuees are to remain at the assembly point until they are signalled or notified that the evacuation alarm has been called off and they can return to work or classes, or that they have been cancelled.

When following an escape route, it is forbidden to:

- stop,
- move "the wrong way", in a different direction than indicated by the evacuation signs.

If the escape route is filled with smoke, move along the right-hand side in a stooped position.

Lp.	Pictogram		Meaning Sign Symbol*	Application
	'Old' standard PN-N-01256-02:1992	'New' Standard PN-EN ISO 7010:2012		
1.			Direction of the evacuation route E-01	The sign indicates the direction toward the exit that can be used in case of danger – to be used with other signs
2.		NO SIGN	Direction of the evacuation route E-02	The sign indicates the direction toward the exit that can be used in case of danger – for independent use
3.			Emergency exit E-03	The sign used for marking exists leading outside the building or to another fire zone as well as rooms which require at least two emergency exits
4.			Emergency exit E-04	The sign is placed above swing doors that constitute emergency exits or are in the evacuation route - left or right door
5.			Direction toward the exit – behind the door to the left and straight forward E-05	The sign used for marking emergency exists behind which the route turns left and continues horizontally
6.			Direction toward the exit – behind the door to the right and straight forward E-06	The sign used for marking the emergency exits behind which the evacuation route turns right and

7.			<p>Direction toward the exit – behind the door to the left and down the stairs E-07</p>	<p>The sign used for marking the emergency exits behind which the evacuation route turns left and continues down the stairs</p>
8.			<p>Direction towards their exit – behind the doors to the right and down the stairs E-08</p>	<p>The sign used for marking the emergency exits behind which the evacuation route turns right and continues down the stairs</p>
9.			<p>Direction towards the exit – behind the door to the right and up the stairs E-09</p>	<p>The sign used for marking the emergency exits behind which the evacuation route turns right and continues up the stairs</p>
10.			<p>Direction to the exit – behind the door to the left and up the stairs E-10</p>	<p>The sign used for marking the emergency exits behind which the evacuation route turns right and continues up the stairs</p>
11.			<p>Direction towards the exit – behind the door down the stairs E-11</p>	<p>The sign used for marking the emergency exits behind which the evacuation route continues down the stairs</p>
12.			<p>Direction towards the exit – behind the door down the stairs E-12</p>	<p>The sign used for marking the emergency exits behind which the evacuation route continues down the stairs</p>
13.			<p>Direction towards the exit – to the left, to the right E-13</p>	<p>The sign shows the direction of the evacuation route towards the exit – it may direct you to the left or to the right</p>

				
14.	 	   	Direction towards the exit of the evacuation down the stairs to the left (or right) E-14	This sign indicates the direction of the evacuation route down the stairs to the left or to the right
15.	 	   	Direction of the evacuation route up the stairs to the left (or right) E-15	This sign indicates the direction of the evacuation route up the stairs to the left or to the right
16.		 	Push to open – the arrow indicates the direction of opening the door E-16	This sign is placed on doors in order to indicate the direction of opening the door
17.		 	Pull to open – the arrow indicates the direction of opening the door E - 17	This sign is placed on doors in order to indicate the direction of opening the door
18.	NO SIGN	 	Turn to gain access E-18	The sign indicates the direction of turning a door handle in a partition 'clockwise' or 'anti-clockwise' in order to gain access. The sign is to be applied in combination with sign no. 4 on sliding door of an emergency exit if such doors are permitted – the arrow indicates the direction of opening the door
19.	 	 	Slide to open E - 19	

20.			<p>Break to gain access</p> <p>E-20</p>	<p>This sign can be placed:</p> <p>a) In a place where breaking glass is necessary to gain access to a key or an opening system</p> <p>b) when it is necessary to break a partition in order to gain access to exit</p>
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Workplace Factors Chemical, physical and biological hazards:

Chemical factors:

Classification:

according to the possible effects and type of interaction:

- *toxic,*
- *irritant,*
- *sensitising,*
- *cancerogenic,*
- *mutagenic,*
- *impairing reproductive function;*

according to the route of absorption:

- *by inhalation,*
- *through the skin,*
- *through the mucosa,*
- *through the digestive tract;*

according to the degree of harmfulness:

- *poisons,*
- *harmful substances,*
- *substances practically harmless to health.*

Description of the effects of chemical substances

Industrial poisoning may have the following course:

- **acute** – with clear symptoms that require immediate intervention,
- **subacute** – developing within a few hours up to several days of contact with a toxic substance,
- **chronic** – due to the introduction of small amounts of a harmful substance into the body over a long time.

The effects of toxic chemicals can be divided into:

- *corrosive;*
- *irritating: the skin and mucous membranes, - the eyes, -the respiratory system;*
- *sensitising: -with skin symptoms, - with respiratory disorders*
- *causing hypoxia: -simple asphyxiant gases, -chemical asphyxiants;*
- *narcotic;*
- *teratogenic;*
- *embryotoxic;*
- *genotoxic;*
- *mutagenic;*
- *cancerogenic.*

Hazard pictograms:

Classification and marking acc. to the Directive 1967/548/WE and 1999/45/WE	Classification and marking in the GHS – CLP system	
E: explosive		Explosives, self-reactive materials A and B; organic peroxides A and B
O: oxidating		oxidating
F+: extremely flammable F: highly flammable		Flammable Pyrophoric; Self-heating Self-reactive C-F Organic peroxides C-F
-----		Pressurised gases
C: caustic		caustic
T+: highly toxic T: toxic		Systemic activity Mutagenic activity Cancerogenic activity Harmful influence on reproduction Sensitising to respiratory tract Toxicity to target organs, cat. 1, 2 Danger caused by respiration
Xn: harmful Xi: irritating/sensitising		Irritating Sensitising to skin Toxicity to target organs, cat. 4
N: Dangerous for the environment		Posing threat to aquatic environment

Before commencing work with a new chemical reagent, each student is required to read the material safety data sheet of the reagent; the data sheet should be provided by the manufacturer along with the reagent.

- Before each experiment it is necessary to consider what chemical reactions and circumstances related to their course may pose a potential threat and take appropriate countermeasures. In case of doubt, ask your assistant for advice.
- To reduce the possibility of an error, read the label on the jar or bottle twice before using chemicals.
- Vessels in which solutions are measured or prepared should be labelled with information about the substance and its concentration.
- Experiments involving the release poisonous, corrosive or fetid gases are only to be carried out under a fume hood.
- Experiments involving larger amounts of poisonous, corrosive and especially flammable substances are only to be carried out under the supervision of an assistant. People working nearby must also be warned.
- You should not taste solid or liquid chemicals with your tongue. Wash your hands thoroughly after working with poisonous substances.
- Pipetting is carried out using pipettes with special suction devices.
- Do not lean over vessels with heated liquids or put your head under the fume cupboard.
- When heating a test tube, do not direct its neck at yourself or your neighbour at the laboratory table.
- If a poisonous, corrosive or flammable substances are spilled, notify the teacher immediately to receive detailed instructions on how to proceed.
- When inserting plugs or rubber hoses onto glass tubes and rods, your hands should be wrapped with a towel. The outer surfaces of the glass should be moistened with water or, even better, with glycerine to reduce the friction between the glass and the rubber.
- When removing the air from a glass vacuum vessel (dessicator, vacuum flask) for the first time, wrap the vessel with a towel due to the danger of implosion.
- All flammable gases (e.g. H_2 , H_2S , AsH_3 , acetylene, hydrocarbons) form explosive mixtures with air. Before igniting such gases, make sure that they do not contain oxygen from the air.
- Rubber hoses for gas taps should be inserted very carefully, making sure that the hose diameter is appropriate. The hose must also be checked for damage. A burner whose flame has spread inside must be immediately turned off and reignited after cooling off.
- Self-igniting substances, e.g. white phosphorus, alkali metals and many high-fineness metals, are particularly dangerous. Flammable organic solvents must be kept away from fire and open electric heaters, etc.
- When using electric measuring instruments, pay particular attention to the quality of electrical connections and the parameters used
- Observe all instructions for working with electrical equipment (do not operate it with wet hands, do not remove its covers, do not insert any objects through the openings in their structure, do not obstruct the air vents, etc.).
- Strictly adhere to the operating manuals of the instruments.

Emergency procedures:

(always adhere to the information included in the material safety data sheets, available manuals and procedures)

Ordinance regulations

- Keep calm in class.
- Leave your outer garments and extra bags or backpacks in the locker room.
- Smoking, eating, drinking or chewing gum in the laboratory rooms is prohibited.
- Exercises should be performed carefully according to the appropriate instructions.
- The following is mandatory when working in a chemical laboratory:
 - protective lab coat – buttoned up and made from natural fabrics. (Do not use lab coats with flammable synthetic fibres).
 - safety glasses (because any kind of eye damage is particularly dangerous)

- safety gloves – especially when working with concentrated gases and lyes.
- long hair – it must be pinned up.

It is also necessary to follow the individual recommendations of the person running the classes

- The laboratory table should always be clean and dry. Dirty laboratory vessels should be washed and dried as soon as possible. Only those utensils that are necessary for work should be placed on the laboratory table at any given moment.
- Use gas and water, and especially reagents and distilled water, sparingly, in the smallest amount necessary to perform the experiment.
- Bottles and jars with reagents intended for common use should be put away at designated places immediately after use. Do not pour or put any leftover, unused reagents back to these vessels. It is also forbidden to leave the bottles open. The bottle caps must not be put away on the table, not even for a moment.
- Measuring instruments may only be started after their settings and connections have been checked by the person running the class. Do not change the settings of operating parameters on your own.
- Each student is responsible for order in their place of work. After finishing work, clean up your table and place the reagents and utensils back where they belong.

Biological factors:

Classification:

- | | |
|---|--|
| <ul style="list-style-type: none"> • microorganisms: <ul style="list-style-type: none"> • bacteria, • viruses, • mushrooms, • protozoa. | <ul style="list-style-type: none"> • macroorganisms: <ul style="list-style-type: none"> • plants, • animals. |
|---|--|

Before starting work during there is a possibility of contact with biological material, each student is required to familiarise themselves with Rector's Order no. 15 / XV R / 2017 on the introduction of the "Procedure in the aftermath of occupational exposure to HIV, HBV, HCV" for employees, students and PhD students. The risk of infection is caused by: breaks in skin integrity due to stabbing, scratching, injuries, spillage on the mucous membranes (mouth, conjunctiva, nasal vestibule), skin contact with a large volume of infectious material. The infection may occur as a result of exposure to: blood, body fluids, vaginal secretion, semen.

REMEMBER!!!!

Each instance of occupational exposure can be dangerous and requires the degree of infection risk to be assessed. Timely preventive action can protect you against infection.

Physical factors:

Classification:

- noise;
- vibrations;
- radiation:
 - ionising,
 - infrared,
 - ultraviolet,
 - laser;
- electromagnetic field;
- electrostatics;
- industrial dust;

- *dangerous factors that may lead to injuries:*
 - *moving machinery,*
 - *moving parts of machines,*
 - *moving products and materials,*
 - *sharp and protruding components and edges.*

During the course the student may come into contact with:

- laser radiation:

Laser radiation is a peculiar type of optical radiation, with such properties as: monochromaticity, beam directionality, high radiation densities, temporal and spatial coherence of radiation.

Laser radiation is harmful to humans due to the absorption of this radiation by human tissue. Thermal, thermoacoustic and photochemical interactions can cause pathological changes. The transmitted energy can be very high, because laser radiation is characterised by high beam convergence initial energy – the so-called collimation.

Human eyes and skin are the most exposed to damage, which depends on the wavelength of radiation.

The following may occur in this case:

- *inflammatory damage to the cornea;*
- *photochemical cataract;*
- *photochemical and thermal damage to the retina;*
- *corneal burns and occlusion;*
- *erythema of the skin (sunburn);*
- *accelerated ageing of the skin;*
- *increased skin pigmentation;*

The maximum level of laser radiation is defined as the maximum permissible exposure (MPE) and depends on:

- *the wavelength of the radiation;*
- *duration of the impulse or exposure;*
- *the type of tissue exposed to the exposure;*

As you can see, when working with a laser, the eyes are the most vulnerable. There are many threats to the eyes. Therefore, the basic preventive actions should involve the selection of appropriate personal protective equipment to protect the eyes from laser radiation.

- UV radiation:

Ultraviolet (UV) radiation is electromagnetic radiation with a wavelength of 40 to 400 nm (which corresponds to the energy range between 30 eV and 3 eV), which places it between visible light and X-rays. The range of ultraviolet radiation is divided into vacuum UV (wavelength of 40-190 nm), far ultraviolet (190-220 nm), UVC (220-290 nm), UVB (290-320 nm), and UVA (320-400 nm).

Sources of ultraviolet radiation: the main source of UV is the sun; notable artificial include tanning parlours, quartz crystals, lamps used in polymer curing, germicidal lamps, mercury lamps, halogen lights, and certain types of laser (excimer lasers, nitrogen laser and Nd: YAG third-harmonic lasers). The risk associated with exposure to UV radiation depends on the wavelength.

UVA is a variant of ultraviolet radiation that we are the most exposed to. UVA stimulates tanning, i.e. increased production of skin pigment (melanin). Moreover, skin erythema also occurs in the event of overexposure to UVA. Only a small portion of UVA is absorbed by the ozone in the atmosphere. Small doses of UVA are needed for the production of vitamin D in the skin. Excessive UVA leads to thickening and hardening of the skin, weakening of the immune system and cataracts. Most medical phototherapy equipment and tanning parlours use UVA-emitting lamps.

Undesirable biological effects of ultraviolet radiation can be exacerbated by chemical substances and drugs (contraceptives, tetracyclines, sulfathiazole, cyclamates, antidepressants, coal tar fractions added to anti-dandruff shampoos, lime oil, and some ingredients of cosmetics).

Clothing (but not in full range — the average cotton fabric retains about 20% of the radiation), glass, acrylic and polycarbonate screens for artificial light sources all protect us against ultraviolet radiation. Creams and lotions with UV filters applied on the skin do not provide full UV protection. The risk associated with overexposure to UV stems from the fact that the radiation is invisible and does not cause immediate skin reaction.

- electromagnetic radiation

Everyone is exposed to electromagnetic fields to a greater or lesser extent.

Electromagnetic radiation can come from natural sources, such as the Earth, Sun and lightning, as well as from man-made sources, including mobile phones, microwave ovens, television sets, computer monitors (cathode ray tubes), high voltage wires, radars, electric vehicles. The potential effects of electromagnetic fields on health are not yet fully researched and known; however, we already know that people affected by this field may experience such symptoms as general weakness of the body, difficulty concentrating, rapid fatigue during mental work, headaches and dizziness, lethargy, sleep disturbances, memory impairment, reduced blood pressure. The effects depend on such factors as the intensity of electromagnetic fields, the time over which a given person is subjected to these fields, and their frequencies. The intensity of electromagnetic radiation is also influenced by the distance between a human being and the source of this field (the further from the radiation source, the smaller it is).

For workstations at risk of excessive electromagnetic radiation, appropriate measures must be taken to reduce this radiation, e.g. shielding the rooms or radiation sources. However, as experts emphasise, shielding is best entrusted to specialized companies, because improperly implemented shielding can increase radiation. In addition, work must be organised in such a way as to keep workers away from the protection zones and prevent them from working in danger zones over the permissible time limit.

First Aid:

*If you notice a person in a state of sudden health risk or witness an incident leading to such a state, **you are obliged to immediately and efficiently report such an event by calling 999 or 112** to the best of your skill and ability (Art. 4 of the Act of 8 September 2006 on Public Emergency Services (Journal Laws of 2013, No. 191, item 1407, as amended).*

In addition, pursuant to Art. 162 Section 1 of the Criminal Code: Whoever does not render assistance to a person in a situation threatening an immediate danger of loss of life or serious impairment, when he can do so without exposing himself or another person to the danger of loss of life or serious impairment, shall be subject to the penalty of imprisonment for up to 3 years.

You are not responsible for any mistakes made while providing help in a situation where you were guided by goodwill. You will not commit a crime if you do not provide help which requires a medical procedure or if immediate help from the appropriate institution or a person is possible (Art. 162 Section 2 of the Criminal Code).

Procedure at the place of incident:

*Do not hesitate to administer first aid, because seconds can often decide between life and death. Stay calm. **If you do not know how what to do, call for help immediately.***

Evaluate the situation

- Take care of your own safety, the safety of the casualty and witnesses of the incident.
- If the place of the incident poses a threat to you, or you are unable to protect yourself adequately, do not approach the casualty, but call for help by contacting the emergency numbers below.
- Make a loud call for help to receive assistance from other witnesses of the incident.
- If by observing the casualty you find that there is a threat to their health or life, summon qualified emergency services by calling the emergency number:
 - 112 — shared emergency number for all services,
 - 999 — Emergency Ambulance Service,
 - 998 — Fire Service,
 - 997 — Police.

Assess the casualty's state.

- If you have gloves from a first aid kit, put them on. Otherwise, protect yourself with, for example, any available foil, especially if there is blood, and try to avoid contact with the casualty's secretions.
- Gently shake the casualty's shoulders.
- Ask out aloud: "Is everything alright?"

If the casualty is conscious and reacts appropriately

- Leave the casualty in the position in which you found them, unless they are in danger.
- Find out as much as possible about their health (what happened, what is wrong with them, what disorder they are suffering from).
- If necessary, call the medical emergency team by calling the 999 or 112 emergency numbers.
- You can always receive support from a medical dispatcher — he will tell you how to administer first aid to the casualty.
- Regularly assess the condition of the casualty until the medical emergency team arrives.

If the casualty is unconscious and is not responsive

- Make a loud call for help without stepping away from them.
- Remove all visible foreign bodies and foreign matter from the casualty's airways.
- Restore the patency of the airways: tilt the casualty's head back and perform the jaw-thrust manoeuvre.
- Monitor the casualty's breath for 10 seconds - place your cheek against their mouth so that you can simultaneously hear and feel the breath and observe whether the chest of the casualty is rising. If there is any doubt as to normal breathing, proceed as if it was abnormal.
- **If the casualty's breath is normal,**
 - put them into the recovery position.
 - Summon the emergency medical team by calling 999 or 112.
 - Regularly evaluate the casualty's state.
- **If the casualty's breath is abnormal (rare and/or irregular) or absent,**
 - summon the emergency medical team by calling 999 or 112, or ask someone to call for help and bring the automatic defibrillator (AED) if it is available. Leave the casualty alone only if there is no other possibility of calling for help.
 - Start with 30 chest compressions: place the heel of one hand in the middle of casualty's chest (the lower part of their sternum), the heel of the other hand - on the back of the first one, lock the fingers of both hands and make sure that the pressure will not be applied to casualty's ribs, keep your arms straight and compress the chest to a depth of approximately 5 cm, but not more than 6 cm.
- If you cannot or do not want to deliver rescue breaths, you can perform only external cardiac massage by compressing the chest with the frequency of at least 100 and at 120 most times per minute. It will increase the chances of the rescue operation performed by the qualified services being successful, and, thus, the chances of casualty's survival.

External cardiac massage

- Do not compress the upper section of the abdomen or the lower section of the sternum.
- Continue chest compression with the frequency of at least 100/min. (without exceeding the frequency of 120/min).

- *If you decide to combine chest compression with rescue breaths, after 30 chest compressions restore the patency of the airways again by tilting the casualty's head back and performing the jaw-thrust manoeuvre.*
- *Perform 2 rescue breaths, i.e. pinch the casualty's nose with your thumb and your index finger and blow the air into their mouth in such a way that the chest will visibly rise; two breaths lasting no longer than 1 second should be delivered immediately one after the other and last no longer than 5 seconds altogether. If you want to avoid direct contact with the skin of the casualty, use a disposable mask.*
- *Continue performing compressions and delivering rescue breaths in a 30:2 ratio.*
- *Stop cardiopulmonary resuscitation only if the casualty begins responding (moving, opening their eyes or breathing normally), or when the medical emergency team or another rescue team arrives, or when you feel worn out.*

If the casualty is a child

- *Remove all visible foreign bodies and foreign matter from the casualty's airways.*
- *Restore the patency of the airways by tilting the casualty's head back and performing the jaw-thrust manoeuvre.*
- *Monitor casualty's breath for 10 seconds - place your cheek against their mouth so that you can simultaneously hear and feel the breath and observe whether the chest of the casualty is rising.*
- *First, perform 5 rescue breaths.*
- *Begin cardiopulmonary resuscitation in the following sequence: 15 compressions of the chest (place the heel of one hand on the lower section of the sternum, lift your fingers to make sure you are not applying pressure to ribs) and 2 rescue breaths.*
- *If you have not been trained to administer first aid to children, follow the procedure that applies to adults, as without taking any action the child's chance of surviving will be small.*
- *In small children perform rescue breaths by covering both the nose and the mouth of the child with your mouth (if you want to avoid direct contact with the casualty's skin use gauze or other material), compression of chest in infants should be performed with pads of two fingers.*

Recovery position

The recovery position is applied in unconscious casualties who are breathing normally. The recovery position should be stable, as close as possible to the flank position with the head tilted and no pressure applied to the chest so as not to impede respiration. Victims of accidents or other people in whom spine injury can be suspected are not to be put in such position.

In order to put the casualty in the recovery position, proceed as follows:

- *if the casualty is wearing glasses - remove them;*
- *kneel down next to the casualty and make sure that they are lying on their back and that both of their legs are straight;*
- *place the hand that is closer to you at the right angle to the body, and bend it at the elbow in such a way that the palm of the hand is oriented upwards.*
- *place their closest hand across the casualty's chest and hold it in such position that its back side rests on the casualty's cheek closest to you;*
- *with your other hand grab the casualty's further leg (right above the knee) and pull it up without lifting the foot off the ground.*
- *grab the casualty's further hand in such a way that you lock the fingers of the casualty with yours;*
- *keeping the casualty's hand pressed against the cheek, pull the further leg so that the casualty rolls to their side towards you;*
- *tilt the casualty's head backwards to restore the patency of the airways and to facilitate breathing.*
- *assess the breath and monitor the state of the casualty.*

Automatic external defibrillator (AED)

If AED is available at the scene, do not be afraid to use it. AED is safe and effective also in your hands. Follow its voice instructions without delay. Standard automatic external defibrillator is suitable for adults and children over 8 years of age.

- *Make sure that you, the victim and the witnesses of the incident are safe.*
- *Assess the victim's state.*
 - *If the victim is unresponsive and is not breathing normally, ask someone to call help and to bring AED if its available.*

- *Perform cardiopulmonary resuscitation in the sequence: 30 chest compressions and 2 rescue breaths.*
- *If you are alone and AED is nearby, begin by plugging it.*
- *Switch it on and place the pads on the bare chest of the casualty.*
- *If the first aid is being given by more than one person, perform cardiopulmonary resuscitation while another person attaches the pads.*
- *Follow AED's voice/visual instructions without delay.*
- *Make sure that nobody is touching the casualty when AED is analysing the rhythm.*
- *If discharge is recommended:*
 - *make sure that nobody is touching the casualty,*
 - *push the defibrillation button as instructed,*
 - *begin cardiopulmonary resuscitation immediately after the discharge,*
 - *Follow AED's further voice/visual instructions.*
- *If discharge is not recommended:*
 - *immediately begin cardiopulmonary resuscitation,*
 - *Follow AED's further voice/visual instructions.*
- *Follow the AED instructions until:*
 - *the casualty begins responding (moving, opening their eyes, breathing normally),*
 - *the medical emergency team or another rescue team arrives,*
 - *you feel worn out.*

Methods of administering first aid in selected emergency cases:

Contusion

- *Place a cold compress on the injured area.*
- *Immobilise the injured limb in a position chosen by the affected person - one that causes them the least pain.*
- *In case of intense pain administer painkillers.*
- *Consult a physician if necessary.*

Wound

- *Using a sterile bandage, stop the bleeding by compressing the bleeding area.*
- *Remove soil and minor foreign bodies from the wound.*
- *Wash the wound using water with soap and a disinfectant.*
- *Dress the wound with a sterile bandage bringing the edges of the wound closer.*
- *Bandage the wound.*
- *Consult a physician if necessary (anti-tetanus prophylaxis).*
- *Do not remove large, sharp objects from the wound; prevent them from moving and leave them in the wound until the medical emergency team arrives.*

Severe bleeding from wound

- *Dress the wound.*
- *Apply local pressure to the wound.*
- *Lift the injured limb above the torso.*
- *If necessary, summon the emergency medical team by calling 999 or 112.*

Faint

- *Place the casualty on their back with their legs above the level of their torso.*
- *Apply cold compresses on the casualty's face.*
- *If loss of consciousness or confusion (verbal contact with the affected person is difficult) is prolonged, summon the medical emergency team by calling 999 or 112.*
-

Spine injury

- *If the casualty is conscious, but you suspect spine injury, do not move them.*
- *Leave them in the position found, avoid transporting them.*
- *Summon the emergency medical team by calling 999 or 112.*

- *Should the necessity to transport the affected person occur, you can do it using stretchers or a wide board, without changing the position of the affected person's body while transporting them.*

Electrocution

- *Do not touch the electrocuted person before you break the contact between the source of electricity and the casualty.*
- *Disconnect the fuses, remove the plug of the electronic device that caused the electrocution from the socket.*
- *Protect yourself from being electrocuted (using, for example, a wooden stick or by putting on rubber gloves).*
- *Check the condition of the casualty - whether they are conscious or not.*
- *Summon the emergency medical team by calling 999 or 112.*
- *If the affected person is not breathing normally, perform 30 chest compressions, 2 rescue breaths; continue chest compressions and rescue breaths in the sequence 30:2, or only compress the chest with the frequency of 100 - 120/min.*
- *If the casualty is not conscious, but they are breathing normally, put them in the recovery position.*
- *Dress the burnt area with a bandage.*
- *Stay with the casualty until the medical emergency team arrives.*

Burns

- *If necessary, summon the fire brigade by calling 998 or 112.*
- *Cool the burned body part using clean water with a temperature of approximately 20°C for 10 to 20 minutes.*
- *Dress the burned body part with a sterile bandage.*
- *In case of intense pain administer painkillers.*
- *If the burn is extensive, summon the medical emergency team by calling 112 or 998.*
- *If the burned body part is the hand, remove the jewellery - before the increasing oedema makes it impossible.*
- *In case of chemical burns, remove the contaminated clothing immediately (before you begin to pour on water).*
- *If the clothing has melted into the body, do not tear it off, just cut off the clothing around the wound.*

Nosebleed

- *Place the casualty in sitting position with their head slightly tilted forward.*
- *The casualty should be breathing through their mouth.*
- *Put cold compresses on the neck and the forehead of the affected person, for example a towel soaked with cold water or ice cubes wrapped in a cloth.*
- *Hold a gauze or a tissue against the nose, press the bleeding nostril and keep it pressed for approximately 10 minutes.*
- *If the nosebleed is heavy and does not subside after performing the above-listed steps (lasts longer than 15 - 20 minutes), an injury to the head or neck occurred, or disturbances of consciousness are present, the medical emergency team should be summoned by calling 999 or 112.*

Foreign body in the airways

In an adult

- *Prompt the casualty to cough.*

- If the foreign body is not removed by coughing, bend the casualty's body over and, standing behind them, deliver up to 5 blows to their interscapular area with the heel of your hand.
- If it does not cause the foreign body to be removed, stand just behind the affected person, bend them over, place your locked hands in the area of their upper abdomen and perform up to 5 dynamic thrusts to their upper abdomen. (halfway between the navel and the end of the sternum).
- If these actions do not result in removing the foreign body from the airways, keep on delivering blows to the interscapular area alternately with performing thrusts to the upper abdomen.
- If the casualty loses consciousness:
- place them safely on the ground,
- summon the medical emergency team by calling 999 or 112,
- begin cardiopulmonary resuscitation in the following sequence: 30 compressions of the chest, 2 rescue breaths.

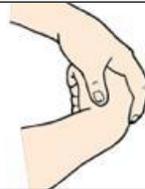
Rękoczyn Heimlicha



1. Position yourself behind the affected person and bend them forward



2. Clench one hand into a fist



3. Place the clenched hand (with its lateral part – from the thumb) against the casualty's abdomen, above the navel and below the xiphoid process of the sternum.



4. Energetically thrust your hands inwards and upwards

In a conscious child

- If coughing is ineffective, deliver 5 blows to the child's interscapular area.
- Place an infant head down on your own forearm, and deliver 5 blows to the interscapular area.
- If the blows are ineffective, perform chest thrusts in infants, and in older children - thrusts to the upper abdomen.
- Continue performing the actions listed above in the sequence: 5 blows to the interscapular area, 5 thrusts to the upper abdomen until the foreign body is expelled.

In an unconscious child

- Restore the patency of the airways, begin cardiopulmonary resuscitation

INFORMATION SECURITY POLICY of Wrocław Medical University

Ordinance no. 109/XV R/2017 of 23 October 2017

Art. 1

Declaration on establishment of the Information Security Policy at Wrocław Medical University

Wrocław Medical University, hereinafter referred to as the Medical University, which has an established position as one of the country's leading centres for medical staff training, provides education and training to physicians of various specialities and to widely defined medical personnel (pharmacists, nurses, midwives, physiotherapists, managers of health care and others), and participates in didactic, scientific and clinical activities. It cooperates with many foreign and domestic partners. In order to perform its tasks, the Medical University uses modern ICT systems which must be reliable and efficient to ensure undisturbed operation of the Medical University.

Information safety is not only a standard and necessity, but also an obligation. The authorities of the Medical University identify the dangers related to information safety in ICT systems, in paper and in other forms

. They recognize the obligation to protect the assets of the Medical University, which can be exposed to loss of confidentiality, integrity or availability while they are being processed or stored.

Introducing the Information Security Policy (hereinafter referred to as ISP), the Rector of the Medical University declares that the implemented Information Safety Management System at the Medical University (ISMS), which constitutes a part of the entire management system, will be subject to continuous improvements, in compliance with the PN-ISO/IEC 27001 and PN-EN ISO 9001 standards. The Rector simultaneously declares to support the adopted ISP and to provide adequate funds necessary for its implementation.

§2

Glossary

The terms appearing in the Information Security Policy mean:

assets - anything that has value for the Medical University;

availability - the property of being available and useful at the request of an authorised entity;

confidentiality - the property consisting in the information not being made available or disclosed to unauthorised persons, entities or processes;

integrity - the property consisting in accuracy and completeness of the assets;

safety of information - maintaining confidentiality, integrity and availability of information; other properties, such as authenticity, accountability, non-repudiation and reliability, can be additionally considered.

The Information Safety Management System (ISMS) - a part of an entire management system that refers to establishing, implementing, operating, monitoring, maintaining and improving information safety, based on institution risk assessment.

Art. 3

General provisions

1. Health and safety of persons is the highest priority, and protection thereof is more important than protection of any other resources.
2. The aim of establishing ISP is to ensure confidentiality, availability and integrity of information processed at the Medical University.
3. All information assets of the Medical University are protected, in particular:
 - information processed at the Medical University, regardless of their medium form;
 - the equipment used for processing, sending and storing information at the Medical University;

- the rooms where key IT equipment is stored, the documents containing confidential information of the Medical University;
 - the software used in ICT systems of the Medical University;
 - the image of the Medical University;
 - archives of the Medical University;
 - other property used or possessed by the Medical University;
 - information owned by counterparties or external entities cooperating with the Medical University.
4. Information Security at the Medical University encompasses not only its premises, but also all situations in which information related to the activity of the Medical University is processed outside its premises. This includes, in particular, remote access to the computer network of the Medical University.

§4

The scope of Information Security Policy

Information Security Policy refers to all resources, i.e. assets, that are directly or indirectly involved in the implementation of didactic, scientific, clinical and business processes, including, in particular, information assets and digital services. ISP concerns all employees of the Medical University as well as postgraduates, interns, residents, trainees, volunteers, students etc., and persons and other institutions that in any way cooperate with the Medical University.

The ISP document applies to all protected information regardless of the form in which it is processed and stored (paper, digital and other).

This document shall prevail over any other documents in the respect of information protection and safety at the Medical University. It shall prevail with regard to detailed policies and other documents concerning Information Safety Management System.

§5

The aims and the principles of information safety

1. The aims of Information Security at the Medical University

Undisturbed and safe implementation of tasks in the fields of didactic, science, care, medicine and business depends on ensuring information and service safety, and is possible provided that the aims listed below and the strategies which express the needs of the Medical University related to them are implemented.

- 1) Aim 1: Continuity and safety of the implementation of didactic, scientific, medical and care processes should be ensured by:
 - limiting the influence of broadly defined ICT-related threats (systems, people, organisation);
 - ensuring high level of reliability and availability of services offered by systems;
 - maintaining high level of confidentiality, integrity and availability of information, adequate to the needs of the Medical University, regardless of the form of information
- 2) Aim 2: Provide actions that are compliant with the law by:
 - proper protection of information classified as secrets protected by law;
 - complying with the existing legal acts, including copyrights;
 - proper protection of information related to the concluded contracts;
 - providing services in electronic form.
- 3) Aim 3: Protection of the image and the reputation of the Medical University must be ensured by:
 - limiting the influence of broadly defined ICT-related threats;
 - limiting the influence of dangers on the implementation of obligations resulting from the concluded agreements and from good practices.

The authorities of the Medical University express support and readiness to incur the costs necessary to achieve these goals and to maintain the resulting level of safety at the Medical University; selection of the measures and methods of applying physical, technical and administrative protections should factor in the results of detailed safety analyses, risk assessment and the economic aspect.

Efficient protection of information resources of the Medical University requires joint action and involvement of all employees as well as students and postgraduates.

In the case of cooperation with the counterparties and the external units, the obligation to protect the resources of the Medical University is determined in the agreements concluded with these entities.

The employees of the Medical University are obliged to use the information resources of the Medical University for official purposes only, unless stated otherwise in the detailed provisions. All operations performed in the computer network of the University (including the electronic mail), particularly those related to confidential resources, can be monitored.

2. Basic rules of information security

The following universal principles are the basis for creating and maintaining an effective Information Safety Management System:

- 1) Principle of authorised access — each employee is familiar with the Information Security Policy, accepts its contents and has signed a statement confirming their knowledge of ISP upon being granted access to information.
- 2) Principle of least privilege – each employee's access is strictly limited to the information which is necessary to perform the tasks entrusted to them.
- 3) Principle of least knowledge – each employee's knowledge about the system to which they have access is strictly limited to the matters that are necessary to perform the tasks entrusted to them (the *need to know* principle).
- 4) Principle of least service – only those services which are necessary for the performance of statutory tasks should be made available.
- 5) Principle of safeguarding — every security mechanism must be secured by another (similar) one. In special cases, a third independent means of security may be additionally used.
- 6) Principle of collective awareness – all employees are aware of the need to protect information resources and actively participate in this process.
- 7) Principle of individual responsibility — individuals are responsible for the safety of individual elements.
- 8) Principle of least presence – only authorised persons have the right to be in certain places.
- 9) Principle of continuous readiness – the system is prepared for any threats. Temporary deactivation of security mechanisms is not acceptable.
- 10) Principle of the weakest link – the security level is determined by the weakest (least secure) component.
- 11) Principle of completeness — protection is only effective when a comprehensive approach is applied, taking into account all the stages and links of the generally defined information processing process.
- 12) Principle of evolution – every system must constantly adapt its internal mechanisms to the changing external conditions.
- 13) Principle of adequacy — the technical and organisational measures used must be adequate to the circumstances.
- 14) Principle of conscious conversation – you do not always have to say what you know but you always have to know what you are saying, where you are saying it and whom you are saying it to.
- 15) Principle of task segregation – tasks and permissions should be divided so that one person cannot gain full authority over the entire organisation.
- 16) Principle of account privacy in systems – every employee and associate of the Medical University, as well as anyone who has been admitted to work with the ICT systems of the Medical University, is obliged to use these systems through individually assigned accounts that uniquely identify and distinguish them.
- 17) Principle of confidentiality of passwords and access codes — every employee and associate of the Medical University is obliged to maintain confidentiality and refrain from providing their passwords and access codes to other people, in particular their personal passwords for IT systems and access codes for rooms. A personal password should not be passed to the supervisor or administrators; otherwise, it should be changed as soon as possible.
- 18) Principle of closed doors – it is prohibited to leave a workplace unprotected, both during and after the business hours, if there is no authorised person inside. This principle does not apply to publicly accessible rooms. At the end of a working day, the last person to leave the room is obliged to close all windows and doors and secure the keys to the room in accordance with the applicable rules for safekeeping the keys.
- 19) Principle of clean desk — avoid leaving documents on the desk unattended. After working hours, all classified documents of the Medical University must be stored in closed cabinets, drawers, shelves, etc.

- 20) Principle of clean whiteboard — after a meeting, all materials must be cleared out and the boards (flipcharts, etc.) must be wiped.
- 21) Principle of clear screen — each computer must have an automatically activated screen saver. In addition, before leaving a running computer unattended, users should lock it (including the screen saver) or, in the case of a longer absence, log out of the system.
- 22) Principle of clear printers — printed information should be removed from printers immediately after printing. In the event of an unsuccessful printing attempt, the user should contact the person supervising the device if there is a suspicion that the document will be printed unattended.
- 23) Principle of clean recycle bin — paper documents and removable storage devices, except for public, promotional, marketing and information materials, should be destroyed in a manner that prevents their reading (in a shredder, placed in purpose-built containers, etc.).
- 24) Principle of responsibility for resources — each user is responsible for the resources available to them (computers, software, systems, accounts, etc.).

Art. 6

Liability for information security at the Medical University

All employees are liable for the security of information at the Medical University in accordance with the scope of their responsibilities. Authorities of the Medical University are responsible for creating the conditions necessary for the functioning and improvement of the Information Safety Management System. Every employee of the Medical University, PhD student, student, intern, resident, trainee, volunteer, etc. is obliged to read the said ISP document. Managers of organisational units are responsible for the security of information in their organisational unit, and in particular for compliance with security rules by subordinate staff and for taking actions to prevent the risk of information loss.

1. Units supervising the implementation of ISP at the Medical University

The following organisational structure operates in order to properly implement the ISP at the Medical University and coordinate all matters related to the University's Information Safety Management System:

- 1) The Plenipotentiary of the Rector for the Protection of Classified Information, responsible for all matters related to the protection of classified information;
- 2) Information Security Administrator, responsible for all matters related to the protection of personal data;
- 3) If necessary, the Rector shall establish the Information Security Team (hereinafter referred to as the IST), which, depending on the needs, may include in particular:
 - Senior Inspector for Defence Affairs and Civil Defence
 - ISO-related staff
 - Plenipotentiary of the Rector for the Protection of Classified Information
 - Internal auditor
 - Head of the Organisational and Legal Department
 - Head of the IT Centre
 - Employee of the Institutional Archives
 - Chief OHS and Fire Safety Specialist
 - Information Security Administrator
 - Spokesperson
 - Other persons, including IT system administrators, whose inclusion in the team is deemed necessary.

The IST evaluates the operation of information security mechanisms at the Medical University and presents proposals for introducing changes to relevant documents, procedures, technical infrastructure, etc. A detailed scope of IST's tasks is defined by the Rector in the ordinance on its appointment.

2. Sanctions for violation of information security rules

Failure to comply with the rules contained in the Information Security Policy document constitutes a violation of employee duties and may result in disciplinary action and in the employee being held liable under the law and the Work Regulations.

Art. 7

Requirements

1. Each employee, PhD student, student, intern, resident, trainee, volunteer, etc. of the Medical University is obliged to read the ISP.

2. Each employee and PhD student at the Medical University must sign a statement to confirm that they have read the Information Security Policy document.
3. A Medical University employee in charge of organising or supervising the cooperation of other institutions with the Medical University is responsible for familiarising the people and institutions cooperating with the Medical University with the provisions of the ISP.

Art. 8

Distribution and management of the Information Security Policy document

It is recommended to distribute this document among the employees of the Medical University, its partners and clients, and selected offices or public administration bodies, as evidence of paying particular attention to the information security of the Medical University and its partners.

The Plenipotentiary for the Protection of Classified Information shall be responsible for managing this document, including its distribution, revisions, and maintaining its consistency with other documents.

Art. 9

Compliance with the law

Protection of information at Wrocław Medical University is carried out in accordance with the following legal provisions, including in particular:

- The Act of 27 July 2005 - Law on Higher Education (Journal of Laws of 2016, item 1842 as amended);
- The Act of 15 April 2011 on Medical Activity (Journal of Laws of 2016, item 1638 as amended);
- The Act of 28 April 2011 on Healthcare Information System (Journal of Laws of 2016, item 1535 as amended) along with the applicable secondary legislation;
- The Act of 6 November 2008 on Patient's Rights and Patient (Journal of Laws of 2017, item 1318 as amended);
- The Act of 23 April 1964 - Civil Code (Journal of Laws of 2017, item 459 as amended);
- The Act of 6 June 1997 - Criminal Code (Journal of Laws of 2016, item 1137 as amended);
- The Act of 26 June 1974 - Labour Code (Journal of Laws of 2016, item 1666 as amended);
- The Act of 14 June 1960 - Code of Administrative Procedure (Journal of Laws of 2017, item 1257);
- The Act of 10 May 2018 on the Protection of Personal Data (Journal of Laws of 2018, item 1000);
- The Act of 5 August 2010 on the Protection of Classified Information (Journal of Laws of 2016, item 1167 as amended);
- The Act of 16 April 1993 on Counteracting Unfair Competition (Journal of Laws No. 153, item 1503 as amended);
- The Act of 22 August 1997 on the Protection of Persons and Property (Journal of Laws of 2016, item 1432 as amended);
- The Act of 29 September 1994 on Accounting (Journal of Laws of 2016, item 1047 as amended);
- The Act of 4 February 1994 on Copyright and Related Rights (Journal on Laws of 2017, item 880 as amended);
- The Act of 6 September 2001 on Access to Public Information (Journal of Laws of 2016, item 1764);
- The Act of 5 July 2002 on the Protection of Certain Electronically Provided Services based on or consisting of Conditional Access (Journal of Laws of 2014, item 1341);
- The Act of 27 July 2001 on Database Protection (Journal of Laws of 2001, No. 128, item 1402 as amended).
- The Act of 5 September 2016 on Trust Services and Electronic Identification (Journal of Laws of 2016, item 1579 as amended).