

Health and safety at work – entry training

First name, surname

Faculty **Year**

Institution **Date**

I. GENERAL PRINCIPLES AND DUTIES PERTAINING TO HEALTH AND SAFETY AT WORK

1. When walking in buildings and workplaces to act with care, to use exclusively the designated routes, stairways, entrances and exits, and not to remain in workplaces which are not connected with an educational activity.
2. To carry out only those activities which were stipulated by lecturers or relate to the fulfilment of educational duties.
3. To maintain order in the laboratories and immediately inform the appropriate lecturer of any possible insufficiencies.
4. Not to interfere with technical equipment (electrical installations, gas, elevator equipment, compressor equipment, etc.)
5. To use electrical appliances and equipment in accordance with section 3 of Act 50/1978 Coll., on the basis of knowledge of the electrical equipment and being apprised of possible threats to health represented by this equipment.
6. From the point of view of administrative activities this relates to office technology (PCs, photocopiers, etc.) and in the case of technical and laboratory activities it relates to tools, appliances and equipment.

II. BASIC HEALTH AND SAFETY AT WORK DUTIES OF A STUDENT

Each student shall pay regard to his/her own health and safety and to the health and safety of persons with whom they are in immediate contact. The student shall also participate in the creation of a safe and healthy environment on the university premises.

The student shall, above all:

- participate in training in the general principles of health and safety at work and agree to verification of their knowledge,
- agree to specified medical examinations and inspections,
- comply with the regulations and principles of safe conduct on the university premises,

- comply with the stipulated work procedures and make use in his/her work of the provided protective resources and protective equipment,
- not use alcoholic drinks and not abuse narcotic substances on the school premises and not arrive on the university premises under their influence,
- not smoke on the university premises,
- notify lecturers immediately of any injury or accident and, if the state of health of the injured person permits, participate in investigating the cause and circumstances of the accident,
- immediately announce defects to the equipment and appliances which could threaten safety at work,

III. PRINCIPLES OF SAFE LABORATORY WORK

1. When working in a laboratory the student must be acquainted with the potential danger which could be involved in using chemicals and appliances.
2. When working it is necessary to ensure proper ventilation; it is best to work in fume-cupboards.
3. When working it is necessary to use protective equipment (lab coat, gloves, glasses, shields, etc.).
4. Eating, drinking and smoking are forbidden in the laboratories.
5. Long hair must be tied back in such a way that it cannot make contact with chemicals, naked flames or revolving elements on appliances.
6. Whenever chemicals make contact with hands it is necessary to quickly rinse them in running water and then thoroughly wash with soap and hot water. Wash chemicals from the eyes with a flow of running water, immediately remove all affected parts of clothing. Avoid non-specialist intervention.
7. When handling substances in open vessels it is necessary to keep the mouth of the vessel turned away from yourself and other persons.
8. All experiments or operations which use chemicals or which create products releasing fumes, volatile and toxic gases and steam, or combustible and stinging substances must be carried out in fume hoods.
9. Do not use a regular oral pipette in the case of substances which are harmful to health or are volatile.
10. Throw out any damaged glass or porcelain vessels immediately, using special receptacles.
11. Waste chemicals and products may not be poured into the drainage system if they are volatile or toxic substances, or are substances releasing steam, etc.
12. Waste solvents must be placed in special receptacles.

13. Work with compression equipment including work with bottles for technical gas may only be carried out under guidance and in the presence of a lecturer.
14. When leaving a laboratory the workplace must be cleared up, all power and water supplies must be closed and you must ensure that the laboratory is in a safe state and that there is no risk of fire.

IV. FIRST AID

First aid must always be provided rapidly and readily. All university accidents must be announced to the appropriate teacher who will provide first aid and arrange for a medical investigation according to requirements.

Cuts – apply a sterile bandage or plaster, in the event of heavy bleeding a pressure or rubber bandage, arrange for a medical examination,

Burns – cool with running water or ice through a protective covering (clean foil), medical examination

Skin problems – in the event of coming into contact with an acidic or caustic solution rinse the affected area with running water and according to requirements neutralise the acid with 2% NaHCO₃ alkaline 2% CH₃COOH.

When using toxic substances

- do not induce vomiting in a person who is unconscious after using acid or alkaline, etc.
- dilute contents of the stomach with water or water with active carbon (if the person affected is conscious), inducing vomiting is effective only within two hours of using liquids and within four hours of using solid substances
- take person affected to doctor

Inhaling toxic substances

Take the affected person into fresh air and remove contaminated clothing, seek medical help as soon as possible.

Incursion of an aggressive substance into the eye

Rinse intensively with water (approximately 15 minutes) – seek medical help
In the case of a reaction caused by a solid substance, first try to remove it from the eye. Do not rub the eye!

Electric shocks

Disengage the person affected from the reach of the electrical current (by switching off the electricity supply, pushing away the conductor, removing the person affected from the reach of the electrical current with insulated equipment)

If the person affected is not breathing give artificial respiration at once and, as the case may be, indirect heart massage.

Accompany the affected person to a doctor, since an injury associated with electricity may result in shock or interruption of the rhythm of the heart several hours after the accident.

Frostbite (this may result, for instance, from work with liquid nitrogen or oxygen)

Plunge frozen part into a water bath at a temperature of 40 – 42°C (not hotter).

Do not apply heat to any frozen parts of body

Accompany to doctor.

V. FIRE PROTECTION

A. Duties of university students in respect of fire safety

1. Abide by the stipulated fire regulations and measures (ban on smoking and handling of naked flames and other warning charts and notices).
2. Get to know the fire risk of the relevant workplace and do not enter an area which is not connected with the performance of educational duties and do not intervene with equipment in such an area.
3. Get to know the fire regulations of the workplace, the fire alarm instructions and the fire evacuation plan.
4. Get to know the special requirements on the operation of the relevant laboratories and in the event of fire or ascertaining fire defects immediately inform the appropriate teacher or university employee.
5. Get to know the location and use of fire protection resources on the workplace and in the event of fire use fire extinguishers to put out a fire.

B. Risk factors for fire in the workplace – the possibility of a fire starting

1. Non-compliance with the ban on smoking and handling naked flames.
2. The operation of unauthorised heat appliances (e.g. radiators, cookers, etc.)
3. Use of damaged electrical and gas equipment and appliances.
4. Negligence in the operation of heat appliances – not switching off an appliance, not keeping a safe distance of combustible substances from heat appliances
5. Non-specialist repairs carried out on electrical installations and gas distributors and non-compliance with safety regulations when storing combustible substances.

C. Basic information on the use of fire extinguishers (description and use)

1. Water-based fire extinguishers

After releasing from stand remove safety pin and press control fixture (in the case of an extinguisher under permanent pressure) or in the case of an appliance with a pressure cartridge a strike on the buffer sets the extinguisher into operation (range approximately 10 m). The extinguisher is used mainly for extinguishing fire class A (wood, paper, textiles).

It must not be used for extinguishing live electrical equipment and for combustible fluids which do not mix with water.

2. Sand-based fire extinguishers

The procedure for setting the extinguisher into operation is the same as in the case of a water based extinguisher. The extinguisher has a universal use – it extinguishes organic substances (type A), combustible liquids (type B), combustible gases (type C) and electrical equipment of a voltage of up to 1,000 V. It should not be used for extinguishing fine organic substances (filings, dust) because of the threat of the fire spreading.

3. CO² (snow) fire extinguisher

This is an extinguisher in which carbon dioxide is under high pressure and after pressing the control armature or, in the case of older extinguishers, by turning the valve, the extinguisher is set into operation. The appliance extinguishes live electrical equipment, combustible liquids (B) and combustible gases (C). It should not be used for extinguishing fine organic substances (filings, dust), because of the threat of the fire spreading

Note: Sand and snow based fire extinguishers may be low-volume types – 1 kg, 1.5 kg, 2 kg.

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signature of the student

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signature of the tutor