

OSH & FP

**Students** 



## Abbreviations used in the presentation

OSH – Occupational safety and health

FP – Fire protection

PPE – Personal protective equipment



## Laws and regulations (OSH & FP)

Act No 262/2006, Labor Code

Act No 309/2006, Act regulating further requirements for occupational safety and health in labor relations and ensuring occupational safety and health during activities or provision of services outside labor relations (Act on ensuring further conditions for safety and health protection at work)

Act No 133/1985, Act of the Czech National Council on Fire Protection

Act No 111/1998, Higher Education Institutions Act

Decree No 64/2005, Decree on the registration of accidents involving children, pupils and students



## Why comply with occupational safety regulations?

Elimination of injuries

Elimination of permanent consequences

Improvement of conditions for studies

Compliance with legal obligations

Financial reasons



# Why is there OHS training according to the Labor Code for students?

**Section 103(2) of the Act**: The employer is obliged to provide employees with training on legal and other regulations to ensure safety and health at work, which supplement their professional qualifications and requirements for the performance of work, which relate to the work they perform and relate to the risks with which the employee may come into contact at the workplace, at which the work is performed, and to systematically require and monitor compliance. The employer is obliged to provide training in accordance with the first sentence when an employee starts work and

- a) When there is a change in job classification or type of work,
- b) When new technology is introduced or there is a change in production and work equipment or a change in technological and work procedures,
- c) In cases that may have a significant impact on occupational health and safety

The employer is obliged to train all persons present at the workplace, including students, no later than on the day they commence their studies.



### **Essential OSH**

**Section 106** Every employee (student) is obliged to take care of their own safety and health and of the safety and health of other persons who are directly affected by their actions or omissions at work to the best of their ability. Knowledge of the basic duties arising from legal and other regulations and the employer's requirements for ensuring safety and health at work is an integral and permanent part of the employee's qualifications.



## Student liability for damage caused

**Section 391(1) of the Act:** Students of secondary schools, conservatories and language schools with the right to conduct state language examinations or students of higher vocational schools are liable to the legal entity operating the school or educational institution or to the legal or natural person at whose workplace practical training takes place for damage caused during theoretical or practical training or in direct connection with it. If the damage occurred during education outside of instruction at an educational institution or in direct connection with it, pupils or students are liable for the damage to the legal entity operating the educational institution. Students of higher education institutions are liable to the higher education institution for damage caused to it during their studies or practical training in a degree programme provided by the higher education institution or in direct connection with it. If the damage occurred during studies or practical training or in direct connection with them at another legal entity or natural person, the students are liable to the legal entity or natural person where the studies or practical training took place.

Act No 262/2006, Labor Code



## Liability of higher education institutions for damage caused

**Section 391(4) of the Act**: The relevant higher education institution shall be liable to students of higher education institutions for damage suffered by them as a result of a breach of legal obligations or an accident during their studies or practical training in a degree programme implemented by the higher education institution or in direct connection therewith. If the damage occurred during studies or practical training or in direct connection with them at another legal entity or natural person, the legal entity or natural person at which the studies or practical training took place is liable.



### Risk assessment

The basic document used for risk analysis and assessment was issued as USB Rector's Ordinance R\_595:

#### **OVERVIEW**

of identified potential risks in the area of occupational health and safety at the University of South Bohemia in České Budějovice





## Overview of general principles

When walking in buildings, proceed with caution, keep the floor clean, walk with caution on wet surfaces (water, snow) and have any wet areas cleared as soon as possible.

Do not place obstacles in the way; remove them if necessary.

Do not run up and down the stairs and do not reduce your attention by using a mobile phone.

Be careful when opening doors into open spaces.





## Student obligations

Take care of your own safety to the best of your ability.

Participate in training, including knowledge assessment.

Comply with legal and other regulations to ensure occupational health and safety and fire protection.

Comply with established work procedures.

Use the specified work equipment and PPE.

Use protective devices, do not change or remove them arbitrarily.

Report any detected defects to the responsible employee.



## No smoking

Smoking is prohibited throughout the entire USB premises.

The place where the employer may allow smoking must be a closed part of the building to prevent smoke from entering indoor areas where smoking is prohibited.

The smoking area must be clearly marked at the entrance with the following sign:







No smoking

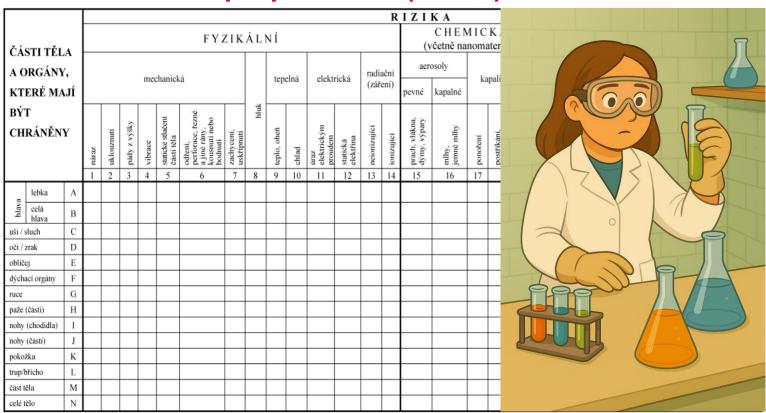
Smoking permitted



## Personal protective equipment (PPE)

Mandatory use.

Keep in working order.



Government Regulation No 390/2021, Government Regulation on detailed conditions for the provision of personal protective equipment, washing, cleaning and disinfecting agents



## Personal protective equipment (PPE)

		HAZARDS																								
BODY PARTS AND ORGANS		PHYSICAL										CHEMICAL (in all a line of a real and a line)					0 0					Other hazards				
	Me	Mechanical							Heat Electric Radiation					(including nanomaterials)  Liquids  Aerosols			ls)	Aero-			Materials, persons,			E		
														Solid	Solid Liquid				sols	sols		animals, etc.			sibili	
TO BE PROTECTED	Impact	Slipping	Fall from height	Vibrations	static compression of body parts	Abrasions, perforations, cuts and other wounds, bites or stings	Entangling, pinching	Noise	Heat, fire	Cold	Electric shock injury	Static electricity	Non-ionizing	lonizing	Dust, fibres, smoke, vapours	Fog, mist	Submersion	Spraying, dispersion, spurting	Gases, vapours	Solid, liquid	Direct and indirect contact	Spraying, dispersion, spurting		Drowning	Lack of oxygen	Insufficient visibility
	1	2	3	4	5	6	7	8	9	10	11	12	2 1	3 I4	I3	16	17	l8	19	20	21	22	23	24	2	26
Head Skull A																										
Whole B head																										
Ears / C Hearing																										
Eyes / Sight D																										
Face E																										
Respiratory F																										
organs Hands G																										
Arms (parts) H																										
Legs (feet)																										
Legs (parts)																										
Skin K																										
Torso/belly L																										
Body part M																										
Whole body N																										



## Electrical appliances

Use only undamaged devices.

Use movable power leads in such a way that they cannot be damaged.

Place appliances only in designated locations, do not modify them, and do not operate them with wet hands.

When handling a device connected to the grid via a movable electrical lead (extension cord), first disconnect it from the grid.

Switch off electrical appliances when leaving the place of use.





## Chemicals and laboratory work

Students must be acquainted with the effects of chemicals and how to handle them, protective measures, first aid principles, necessary decontamination procedures, and procedures for dealing with malfunctions and accidents. They are required to follow all instructions provided by the manufacturer of hazardous substances on the product label.

Flammable substances must be stored separately from other chemicals, including poisons, in a designated area.

Use the prescribed PPE (protective coat against contamination is not PPE and students must purchase it at their own expense).





## Damaged tools and equipment

Do not use damaged tools or instruments!!





# Ensuring occupational health and safety and fire safety at extracurricular events

Participants in the event are required in particular to:

comply with the Rector's ordinances for these events, follow the instructions of the event leader and the instructions of the instructors issued in accordance with legal regulations, inform the event leader of their state of health and physical abilities, report any changes in their state of health or physical abilities, not endanger their own health or the health of others and not cause damage to property, report any defect they notice that could endanger the participants of the event, not switch on, switch off or operate machines and equipment that have not been assigned to them, observe the internal rules of the accommodation facilities, not to leave the venue of the event without the consent of the event leader,

alcohol consumption and the use of intoxicating substances are strictly prohibited at the event.



## Injury at school or during school events

#### Provide first aid immediately!!

Report the injury to the teacher or designated person.

Call the emergency services using 155 (in the event of a serious accident).

Cooperate in clarifying the causes of the accident.





## Pregnant women

are prohibited from engaging in the following activities:

Work with chemicals classified as toxic, carcinogenic, mutagenic, or reprotoxic.

Work with biological agents of groups 2, 3, 4 (viruses, bacteria, and fungi that can cause infections).

Work with ionizing radiation.

Frequent lifting of loads heavier than 5 kg, occasionally heavier than 10 kg.

Work at heights above 1.5 m.

Night work.

Some work with animals.





## Alcohol and other addictive substances

It is forbidden to consume alcoholic beverages or other addictive substances on university premises or at events organized by the university.





### Meal breaks

The employer is obliged to provide the employee with a break for meals and rest lasting at least 30 minutes after no more than 6 hours of continuous work; underage employees must be provided with this break after no more than 4.5 hours of continuous work.

If the break for meals and rest is divided, at least one part of it must be at least 15 minutes long.

Breaks for meals and rest are not provided at the beginning and end of working hours and are not included in working hours.

If a safety break falls during a break for meals and rest, the break for meals and rest is included in working hours.



## Load handling

Proper lifting technique: Use your legs, not your back, when lifting loads. Keep your back straight, bend your knees, and lift the load using your leg muscles.

Proper weight distribution: If possible, divide heavy loads into smaller parts. When carrying loads, try to maintain balance and stability.

Use of aids: Use available aids such as trolleys, lifting devices, or wheelbarrows to minimize physical effort and the risk of injury.

Correct posture: When carrying loads, keep the load as close to your body as possible and avoid twisting your torso. When turning, move your whole body, not just your waist.

#### Weight limits

Occasional lifting: men 50 kg, women 20 kg
Frequent lifting: men 30 kg, women 15 kg
When working in a seated position: men 5 kg, women 3 kg



## Work at height

Work at height includes any activity performed at a height of more than 1.5 meters above the ground or above an unsecured depth where there is a risk of falling. This may include work on roofs, scaffolding, ladders, platforms or other elevated places.

Use of PPE

Workplace safety

**Employee training** 

Equipment inspection

Work safety at height



## Ladders

For short-term work only.

Undamaged ladder.

Ensure stability.

Safety chains, stabilizing bars, and fittings on double ladders.

Both upper ends must rest on the upper surface.

The ladder for climbing must extend at least 1.1 m above the exit level.

Do not place improvised mats under the ladder.

Do not carry loads weighing more than 15 kg.

Only one person is allowed on the ladder at a time.

Observe the maximum load capacity.

Distance between feet and upper edge (single ladder 0.8 m; double ladder 0.5 m).



## Workplace lighting

Uniform lighting: Use of natural light.

Local lighting directly above the desk.

Timely replacement of faulty light fixtures.

Window cleaning.

Type of work activity	Light intensity per m2
Public outdoor workplace	30 lux
Room illumination for easy orientation during occasional stay	50 lux
Workplaces including leisure activities but vision plays a key role	100 lux
Workplaces where high-contrast equipment is handled	300 lux
Workplaces where medium-contrast equipment is handled	500 lux
Workplaces where high-contrast items are handled	1000 lux
Workplaces where items at the edge of visibility are handled	3000 – 10000 lux
Corridors and communication areas	100 lux
Receptions	300 lux
Changing rooms and toilets	200 lux
Offices – writing, reading, data processing	500 lux
Offices – document sorting, copying	300 lux
Rest areas	100 lux
Loading ramps	150 lux
Rack warehouses without operator	20 lux
Rack warehouses with operator	150 lux
Bakery	300 lux
Laundry and dry-cleaning service	300 lux
Hairdresser	500 lux
Jewellery shop	1000 lux
Electronics assembly	1000 lux
Watchmaking	2000



## What is the correct way to sit at a computer?

When sitting, the height of the tabletop should be the same as the height of the elbows. The forearms and upper arms should form a 90° angle.

The chair should allow for an upright posture.

The calf should form a 90° angle with the thigh at the knee.

The distance between the monitor and the eyes should be approximately 45–70 cm.

The center of the screen should be about 20–35 degrees below the horizontal axis of the eyes and the upper edge slightly above the horizontal axis of the eyes.

The keyboard and mouse should be within reach. For men, the forward reach is 50 cm, for women 44 cm. The lateral reach is 77 cm for men and 69 cm for women. We

recommend using a gel mouse pad to support the forearms.

The height of the desk should be about 72 cm above the floor, slightly less for women.

There should be enough space for the legs to be stretched out. A footrest that can be positioned and tilted is ideal and very effective.





## Work categorization table

KATEGORIE										
1	2	3	4							
no probable adverse health effects	adverse health effects in exceptional cases	hygienic limits are exceeded	there is a high risk of health hazards at work							

Each work position is classified according to the risk assessment at the specific workplace.

Students are classified as category '1' because they are not exposed to hazardous substances for long periods of time in hazardous places of work.



## Fire safety

Do not cause a fire.

Observe fire safety regulations and prohibitions.

Do not damage fire protection equipment and keep it in good working order.

Keep escape routes, fire-fighting equipment and electrical power distribution equipment accessible.

Do not work with damaged electrical equipment.

Switch off electrical appliances when leaving the workplace.

Observe the regulations for storing flammable substances.



## Fire

If a fire is detected, extinguish it using available means.

When a fire alarm is sounded, follow the evacuation procedure.

Know the location of fire extinguishers (the location is marked).

Know the location of fire alarm guidelines (announcement and response to a fire).

Know the location of the building evacuation plan (safe exit from the building).



Práškový hasicí přístroj						
ldeální použití:	<ul> <li>§ Průmysl, obchod, energetika, důlní hornictví, olejové a plynové kotelny, kanceláře, knihovny, rodinné domy, rekreační objekty, garáže.</li> <li>§ Třída požáru: A, B, C.</li> </ul>					
Vhodné použití:	<ul> <li>§ Úřady, sklady, archívy, obchodní domy, školy, hotely, nemocnice, chaty, sklepy, dílny, železniční přeprava, automobily.</li> <li>§ Tam, kde nesmí dojít k poškození vodou nebo pěnou.</li> <li>§ K hašení zařízení pod napětím max. do 1000 V z min. vzdálenosti 1 m.</li> </ul>					
Nevhodné použití:	S Jemná mechanika a elektronika, telefonní ústředny, elektrické rozvodny, místnosti, kde jsou přístroje citlivé na prach.					
Nesmí se použít:	• § Lehké hořlavé a alkalické kovy, volně ložené sypké materiály, prach (nebezpečí výbuchu a rozšíření požáru).					



Dry powder fire extinguisher

#### Ideal use:

- Industry, trade, energy, mining, oil and gas boiler rooms, offices, libraries, family homes, recreational facilities, garages
- Fire class: A, B, C

#### Suitable use:

- Offices, warehouses, archives, department stores, schools, hotels, hospitals, cottages, cellars, workshops, railway transport, cars.
- In areas where damage by water or foam must be avoided.
- For extinguishing live equipment up to 1000 V from a minimum distance of 1 m.

#### Unsuitable use:

- Precision mechanics and electronics, telephone exchanges, electrical switchboards, rooms with dust-sensitive equipment. Must not be used:
- Light, flammable, and alkali metals, loose bulk materials, dust (risk of explosion and spread of fire).



#### ·Sněhový hasicí přístroj Elektrická zařízení pod napětím (výpočetní střediska, telefonní ústředny, energetická centra), hořlavé plyny. • § Ideální použití: • § Třída požáru: B, C. Laboratoře, potravinářství, energetika, prostory s jemnou mechanikou, elektronickými zařízeními nebo Vhodné použití: hořlavými kapalinami. Tam, kde by neměly zůstat zbytky hasební látky. Pevné látky typu dřeva, textilií, uhlí (možnost opětovného vznícení od zahřátých konstrukcí). • § Na otevřených prostranstvích s velkou výměnou vzduchu. Nevhodné použití: V uzavřených prostorách s výskytem osob (možnost vzniku nebezpečné koncentrace CO<sub>2</sub> – nebezpečí udušení). Nesmí se použít: Hořlavé prachy, sypké látky (nebezpečí výbuchu a rozšíření požáru), hořlavé a alkalické kovy. • §



#### Carbon dioxide extinguisher

#### Ideal use:

- Live electrical equipment (computer centers, telephone exchanges, power centers), flammable gases.
- Fire class: B, C

#### Suitable use:

- Laboratories, food industry, energy sector, rooms with precision mechanics, electronic equipment or flammable liquids.
- Where no residue of the extinguishing agent should remain.

#### Not suitable for use:

- Solid materials such as wood, textiles, coal (risk of re-ignition from heated structures).
- In open areas with high air exchange.
- In enclosed spaces with people present (possibility of dangerous CO2 concentrations risk of suffocation).

#### Must not be used:

- Combustible dusts, loose substances (risk of explosion and spread of fire), flammable and alkaline metals.



Práškový hasicí přístroj						
ldeální použití:	<ul> <li>§ Průmysl, obchod, energetika, důlní hornictví, olejové a plynové kotelny, kanceláře, knihovny, rodinné domy, rekreační objekty, garáže.</li> <li>§ Třída požáru: A, B, C.</li> </ul>					
Vhodné použití:	<ul> <li>§ Úřady, sklady, archívy, obchodní domy, školy, hotely, nemocnice, chaty, sklepy, dílny, železniční přeprava, automobily.</li> <li>§ Tam, kde nesmí dojít k poškození vodou nebo pěnou.</li> <li>§ K hašení zařízení pod napětím max. do 1000 V z min. vzdálenosti 1 m.</li> </ul>					
Nevhodné použití:	S Jemná mechanika a elektronika, telefonní ústředny, elektrické rozvodny, místnosti, kde jsou přístroje citlivé na prach.					
Nesmí se použít:	• § Lehké hořlavé a alkalické kovy, volně ložené sypké materiály, prach (nebezpečí výbuchu a rozšíření požáru).					



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#### Ideal use:

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- Offices, warehouses, archives, department stores, schools, hotels, hospitals, cottages, cellars, workshops, railway transport, cars.
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- Precision mechanics and electronics, telephone exchanges, electrical switchboards, rooms with dust-sensitive equipment. Must not be used:
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- Solid materials such as wood, textiles, coal (risk of re-ignition from heated structures).
- In open areas with high air exchange.
- In enclosed spaces with people present (possibility of dangerous CO2 concentrations risk of suffocation).

#### Must not be used:

- Combustible dusts, loose substances (risk of explosion and spread of fire), flammable and alkaline metals.



NO ZÁKAZN	* Pěnový hasicí přístroj
Ideální použití:	<ul> <li>§ Hořlavé kapaliny nemísící se s vodou (benzín, motorová nafta, minerální oleje, tuky apod.).</li> <li>§ Třída požáru: A, B.</li> </ul>
Vhodné použití:	• § Sklady, komerční objekty, domácnosti, pevné látky (dřevo, papír, uhlí, textilie, pryž).
Nevhodné použití:	• § Hořlavé kapaliny nízkovroucí a mísící se s vodou (alkoholy), hořlavé plyny a kovy.
Nesmí se použít:	<ul> <li>§ Elektrická zařízení pod napětím a v jejich blízkosti (riziko úrazu el. proudem), hořlavé kovy (např. hořčík a jeho slitiny s hliníkem).</li> </ul>



#### Foam fire extinguisher

#### Ideal use:

- Flammable liquids that do not mix with water (gasoline, diesel fuel, mineral oils, fats, etc.)
- Fire class: A, B.

#### Suitable use:

- Warehouses, commercial buildings, households, solid materials (wood, paper, coal, textiles, rubber).

#### Unsuitable use:

- Flammable liquids with low boiling points and miscible with water (alcohols), flammable gases and metals.

#### Must not be used:

- Live electrical equipment and in its vicinity (risk of electric shock), flammable metals (e.g. magnesium and its alloys with aluminium).



## Vodní hasicí přístroj

ldeální použití:	<ul> <li>§ Pevné hořlavé látky organického původu, které žhnou (dřevo, papír, sláma, uhlí, textil apod.).</li> <li>§ Třída požáru: A</li> </ul>
Vhodné použití:	<ul> <li>§ Papírenský a dřevařský průmysl, sklady pevných hořlavých látek, školy, archívy.</li> <li>§ Hořlavé kapaliny rozpustné ve vodě (alkoholy, ketony).</li> </ul>
Nevhodné použití:	<ul> <li>§ Hořlavé kapaliny nemísící se s vodou (benzín, motorová nafta, minerální oleje), hořlavé plyny.</li> <li>§ Cenné materiály a zařízení, kde je nebezpečí škod promáčením.</li> </ul>
Nesmí se použít:	<ul> <li>§ Elektrická zařízení pod napětím a v jejich blízkosti (riziko úrazu el. proudem), lehké a alkalické kovy, látky, které prudce reagují s vodou.</li> </ul>



Water fire extinguisher

Ideal use:

- Solid combustible materials of organic origin that glow (wood, paper, straw, coal, textiles, etc.)
- Fire class: A

Suitable use:

- Paper and wood industry, warehouses for solid combustible materials, schools, archives.
- Flammable liquids soluble in water (alcohols, ketones).

Unsuitable use:

- Flammable liquids not miscible with water (gasoline, diesel fuel, mineral oils), flammable gases.
- Valuable materials and equipment where there is a risk of damage from soaking.

Must not be used:

- Live electrical equipment and in its vicinity (risk of electric shock), light and alkali metals, substances that react violently with water.



## Providing first aid

The first aid plan is a set of principles and procedures for providing first aid.

Záchranka app is a great tool for providing first aid.



First aid Station (first aid kit)











# Safety signs and their depictions Information

HLAVNÍ UZÁVĚR PLYNU

Main gas shut-off valve





# Safety signs and their depictions Warning Mandatory





Explosion hazard zone 2!

Wear protective gloves



# Safety signs and their depictions Prohibition





## Please take the test