Guideline

Graz University of Technology Fire Safety Regulations

RL 91000 BOTU 162-01

Graz University of Technology
Rechbauerstraße 12
A-8010 Graz
Telephone +43 (0) 316 873 / 0

	Created / last updated	Reviewed	Approved
Name	Christian ZOLLER	Lukas STEINER	Rectorate decision
Date	07.03.2023	10.03.2023	14.03.2023

PURPOSE

The following fire safety regulations provide important information about how to behave to ensure safe operating procedures, avoid endangering health and property, prevent serious damage that can be caused by fires, and how to behave in the event of a fire. Strict adherence to the following regulations is required.

SCOPE

These fire safety regulations apply to all of Graz University of Technology (TU Graz), including at all of its locations, institutes, and organisational units. The activities described in the fire safety regulations are exclusively limited to the areas owned or rented by TU Graz.

DISTRIBUTION LISTS

To be distributed to all TU Graz staff or members via the TU Graz newsletter (*Mitteilungsblatt*) and TU4U.

MUTUAL RELATIONS

If a TU Graz organisational unit (OU) fails to comply with these regulations, this OU is internally liable to the Rectorate for all resulting damages. This applies in the same way to all TU Graz tenants.

APPLICABLE DOCUMENTS

- RL 92000 VRHB 076-03 Authorisations and Policies Manual
- RL 92000 HAOR 063-01 House Rules
- AD 95000 NOHB 132-04 Emergency Manual
- Release certificate (waiver) for activities involving fire hazards (fire and hot work, especially, e.g. welding, cutting)
- Event guideline

PUBLICATION AND ENTRY INTO FORCE

The Guideline enters into force upon its publication.

CHANGE STATUS

VERSION	DATE	AMENDMENT	CREATED BY
01	13.02.2023	Preparation of the guideline	Lukas STEINER
02	DD.MM.YYY	Description of the change/update/archiving	First name Surname

RESPONSIBILITY

Responsible party: Head of the OU Buildings and Technical Support (95040). This unit documents/updates the present fire safety regulations and serves as the first point of contact (e.g. for suggestions, questions).

GLOSSARY

Abbreviations and definitions

ABB. ROLE	ROLE DESCRIPTION	ACTIVITY
BSB	Fire Safety Officer (DE: *Brandschutzbeauftragte*r*)	Prepares and complies with fire safety regulations, as well as the instruction of employees regarding the general fire safety regulations. Fire safety measures. Coordinates the fire safety wardens. Maintains fire safety documentation.
BSW	Fire Safety Warden (DE: *Brandschutzwart*in*)	Assists the BSB, in particular during fire safety inspections in the assigned area of operation (OU/Institute).
SFK	Safety Engineer (DE: *Sicherheitsfachkraft*)	Advises and supports employers, staff, safety officers, and staff representatives to help them to fulfil their duties related to occupational safety and healthy and safe workplace design. Supports the BSB in organising fire safety measures and in reviewing fire safety measures to ensure compliance with these measures.
SVP	Safety Officer (DE: *Sicherheits-vertrauensperson*)	Provides information, advice, and support for staff and staff representatives on all issues related to the protection of safety and health.
PD	Preventive Service Department (DE: *Präventivdienst*)	Department in Buildings and Technical Support, responsible for workplace safety and fire safety.
	Institute heads	Perform the function of supervisor for the institute staff and perform the function of employer in the sense of the Worker Protection Act (DE: *ArbeitnehmerInnenschutzgesetz*).
	Heads of service departments and staff units	Perform the function of supervisor for the organisation unit staff as well as perform the function of employer in the sense of the Worker Protection Act, as well as participate in staff matters within the organisational unit's area of responsibility.

Responsibilities and competences

§ 1. Supervisor

The respective supervisors (heads of institutes, heads of service departments and staff units, heads of dean's offices) are responsible for carrying out the initial training session (face to face) and the regularly scheduled instruction of staff. Staff (including temporary workers, freelancer workers, students (undergraduate and graduate level), temporary interns, staff from external companies, etc.) must be made aware of the content of the fire safety regulations during the initial training session, regardless of the employment relationship. This must be confirmed by recording the staff member's signature in the documentation during the initial training session. The confirmation list should be filed in the folder dedicated to health and safety.

§ 2. Fire safety officers

The function of the BSB is carried out within the Preventive Service Department in the Service Department Buildings and Technical Support. The required number of BSBs has been appointed. The BSB and their deputies are responsible for addressing all fire safety issues at all TU Graz locations.
Workers are required to immediately comply with the relevant instructions of the BSB and to report any potential hazards related to fire safety that they observe to the BSB. All fires must be reported to the BSB. All work (e.g. maintenance, servicing) carried out on fire safety systems, as well as all work that could affect these fire safety systems, must be brought to the attention of the BSD ahead of time.

§ 3. Fire safety wardens

BSW are fire safety representatives who are appointed as being responsible for individual parts of an object or an area (usually an institute or an OU) to support the BSB.
The BSW should carry out regular compliance surveys within the assigned area of the university to ensure compliance with the fire safety regulations, then document the results of these surveys.
People who assume the function of BSW at TU Graz must take part in the fire safety warden training according to TRVB 117 O (current version). Fire wardens must also attend an additional training course within five years.

§ 4. Fire safety on construction sites

Fire safety on construction sites is regulated and ensured by the respective construction site coordination team, local construction supervision, and the companies carrying out the construction in coordination with the TU Graz BSB. As a rule, separate BSW or BSB should be appointed for this purpose.

General fire prevention

§ 5. Fire prevention measures

(1) All employees must be aware of the locations of the nearest first aid equipment (fire extinguishers, fixed wall hydrants), defibrillators, and the meeting point. They should also take notice of signage on site (what to do if a fire breaks out, what to do if an accident occurs, escape route plans, campus plans).

(2) Tidiness and cleanliness are essential to preventing fire hazards in every step of the work carried out. After finishing any work, any combustible waste (sawdust, wood dust, oil- and varnish-soaked cleaning rags, metal shavings, ash, slag, etc.) must be removed from the respective areas and, if necessary, disposed of/stored in appropriate containers.

(3) Smoking is prohibited in all areas of TU Graz buildings. Smoking is only allowed in designated locations. The contents of ashtrays may only be emptied into the fireproof waste containers provided.

(4) Regarding events, the application for approval must be submitted to the Buildings and Technical Support organisational unit in due time (i.e. at least two weeks before the event). Compliance with the specifications of the BSB, the fire safety regulations, and the house rules must be ensured. The organiser is responsible for ensuring this compliance. To organise a fire safety inspection, the BSB needs to be contacted at least two weeks before the event by sending an e-mail to brandschutz@tugraz.at to request a survey and inspection of the event area, if necessary.

(5) The use of open flames or fire in all buildings (e.g. candles on Advent wreaths, tea lights, other candles, barbecues) is prohibited. Exceptions to this in open areas require documented approval by the BSB and compliance with the measures defined by the BSB.

(6) Fire and hot work as well as activities that pose fire hazards (welding, cutting, soldering, abrasive cutting, scorching, burning paint, thawing materials using heat, etc.) may only be carried out once the BSB has approved these by issuing a release certificate that enables activities that pose a fire hazard to be carried out. This does not apply to workplaces and workshops provided for this type of work and which are equipped accordingly, e.g. welding workplaces where welding fumes are extracted. To apply for the release certificate for activities posing a fire hazard, it is necessary to contact the BSB at least two working days before performing the work by sending an e-mail to brandschutz@tugraz.at.

(7.) The use of individual heating and cooking devices as well as radiant heaters is prohibited. Exceptions are only permitted in areas that are expressly designated for this purpose, such as kitchenettes, social rooms, or after receiving the approval of the responsible person in Buildings and Technical Support and after consulting with the Preventive Service Department. Compliance with the required safety regulations (e.g. ensuring their appropriate distance from flammable objects, placing them on non-flammable surfaces, disconnecting them from the power supply after closing time, and operating them in accordance with the operating instructions) is mandatory. Only microwave ovens can be used to heat food. Heating food is only permitted under supervision.

(8) The electrical installations must be operated and maintained according to their intended use. Electrical installations may only be modified (repaired) by authorised persons. Objects should not be piled on or around electrical equipment, e.g. electric motors, at any time.

(9) Storing objects of any kind in unsuitable or unauthorised places, including escape routes, corridors, staircases, exits, emergency exits, in passageways, attics, and garages, is prohibited. Any zones that are officially designated as free of fire (i.e. protected zones or fire assembly points) are shown on the escape and rescue plans for the respective buildings.

(10) Hazardous working materials, aerosol gas packs, gas bottles, and flammable liquids should be stored and used only in the appropriate areas designated for them. The maximum quantities permitted by law for storage should be observed. For example, cleaning rags soaked with flammable cleaning agents need to be stored in suitable fireproof waste containers.

(11) Fire extinguishing equipment (fire extinguishers, wall hydrants, supply points for dry risers, etc.) must not – under any circumstances and not even temporarily – be obstructed, hidden from view, or improperly removed from the designated installation locations or used for any other purpose.

(12) Signage and lighting relating to fire safety and escape routes must not be obscured from view, damaged, or removed.

(13) Vehicles of all kinds may only be parked at the campus locations in the (respective) designated parking areas. Vehicles such as bicycles, e-scooters, and similar vehicles may not be brought into the buildings. Escape routes and rescue routes, as well as areas potentially accessed by the fire brigade (e.g. access roads, installation, and traffic areas), may not be obstructed under any circumstances.

(14) Emergency exits must not be blocked or must be able to be opened without aids to ensure access to an escape route. The only exceptions are exits that are equipped with approved escape route safety systems or those that comply with standards.

(15) Escape and traffic routes must always be kept clear of any obstacles, observing the required clearance width. The areas around fire safety doors and curtains must be kept clear, and the closing mechanism must not be blocked or disabled.

(16) Areas with more fire hazards are marked with appropriate signs (signs with mandatory requirements, prohibitions, and instructions) and may only be entered by people who have received proper instruction. The associated safety regulations for the respective area must be observed at all times.

(17) At the end of the workday, the workrooms must be put in order, and all flammable working materials and waste must be stored or disposed of appropriately. Electrical installations and equipment must be switched off or stored safely, insofar as the operation permits this. Valves of gas installations that do not remain in operation must be closed.

(18) The provisions that apply to charging zones for electric vehicles and devices (e.g. safe distances from flammable equipment, protecting against explosions) must be observed. Charging batteries and accumulators for official purposes is only permitted in places and rooms that have been designated for this purpose. Mobile phones, laptops, and other electronic devices contain lithium batteries. These can cause a fire if they are damaged or a short circuit occurs. Please let someone at the information and service points at the respective campus location know as soon as possible if a battery-powered electrical device is damaged, seems hot, or generates smoke.

(19) The following required safe distances must be observed when charging electric forklifts (battery charging systems for industrial trucks):

a) 2.5 m from flammable materials
b) at least 1 m between the batteries to be charged and the chargers
c) at least 1 m from equipment that can emit sparks, such as switches, sockets, and similar devices.
d) at least 5 m between the parking space and areas with fire or explosion hazards
e) the room height in the loading area must be at least 2 m

Fire safety equipment - fire alarm system

§ 6. Push-button alarm / manually activated fire alarm

In buildings where a fire alarm system is installed, push-button alarms (red) have been installed in the areas near exit and emergency exits and that provide access to stairs. These alarms enable a fire alarm to be triggered. When such an alarm is activated, the fire alarm is not only triggered in the building (sirens), but the fire brigade is also alerted directly and immediately. Every staff member is required to memorise the location of the nearest push-button alarm and to activate it if a fire is detected.

Push-button alarms (red with blue inscriptions) are installed at the emergency call locations in pre-designated building areas. When this push-button is activated, the fire brigade is alerted, but no siren alarm is triggered on site.

Note: The push-button alarm (blue) that triggers the house alarm (see § 14) allows you to alarms people in the building and alert them to danger other than events involving a fire (e.g. natural hazards, technical defects). These detectors do not forward the alarm to the fire brigade.

§ 7 Automatic triggering of a fire alarm

Automatic fire detectors and/or aspirating smoke detection systems are installed in buildings with a fire alarm system. Depending on the type, these detection devices trigger a fire alarm when smoke, flames, or heat is detected (i.e. the pre-set detection threshold value is exceeded). This sets off the sirens and automatically alerts the fire brigade. Therefore, in order to avoid triggering any false alarms via the fire alarm system, the BSB must be informed before any work is carried out that might pose a fire hazard (e.g. welding, cutting, soldering, work involving dust or smoke), so that the necessary measures can be taken (e.g. shutting down the respective detectors in the area or taking other organisational measures). At least 50 cm of free space always needs to be available around the fire detectors.

The fire alarm control panels may only be operated by the BSB and the BSW authorised for this purpose and in their areas.

§ 8. Sprinkler system

In building areas equipped with sprinkler systems, these automatically extinguish a fire by releasing water and/or foam-based extinguishing agent when a certain temperature is reached. A network of water pipes is installed on the ceiling in the protected areas. Sprinkler nozzles are attached to this network at regular intervals, which are closed with a glass vial or fusible link. When the activation temperature is reached, this glass vial or fusible link bursts open, enabling the release of the extinguishing agent. Damage to this extinguishing system must be avoided at all costs, because the extinguishing agent

released can cause major damage. Bearings, decorations, and similar objects may not be attached or altered; storage heights may also not be exceeded. If the sprinkler system is set off, the fire alarm is also automatically activated, and the fire brigade is notified.

§ 9. Extinguishing system with a gas extinguishing agent

An extinguishing system with gas extinguishing agents (nitrogen, argon, carbon dioxide, etc.) is installed in certain areas such as those with test benches, data server rooms, and laboratories. This extinguishing system automatically extinguishes a fire and is controlled by the fire alarm system or by manually activation of the system. The extinguishing effect is achieved by displacing oxygen. This extinguishing system is equipped with visual and acoustic warning devices.

a) Areas protected by gas extinguishing systems may only be entered by staff who have received proper instruction. The warning notices posted at the entrances must be observed.
b) Before work is carried out by external companies in the protected areas, the person responsible for the system must be contacted.
c) If these alert devices are activated, the protected room/area must be left immediately.
d) After the extinguishing system has been triggered, the protected room/area may only be re-entered after the fire brigade and/or the BSB has approved re-entry.

§ 10. Water mist extinguishing systems

Water mist extinguishing systems are automatic extinguishing systems which, due to the design of their nozzles, atomise the water into very small droplets, which then are used to efficiently extinguish a fire while using very little water. These systems are used to control incipient fires and to effectively extinguish them. They can be triggered automatically and/or manually.

§ 11. Decommissioning fire safety equipment

Fire safety equipment cannot simply be decommissioned. The BSB may only decommission fire safety equipment when justified reasons exist (construction sites or trials) and once suitable alternative measures have been defined. The substitute measures taken must be demonstrably documented.

General responses in the event of a fire

§ 12. Advisable behaviour

(1) Basic rules

Remove

Alarm

Confine

Extinguish/Evacuate

(2) What you should do in the event of a fire: The following measures must be carried out in the specified order (see also Annex 1, Figure 1):

1. **Raise the alarm**: If a fire is discovered or smoke or a burning smell is detected, the fire brigade must be notified immediately by pressing a push-button alarm or by dialling the emergency number. If possible, the fire brigade should also be given information about the type and size of the fire. If the alarm is raised directly via the fire brigade emergency call system, it is necessary to answer the questions asked by the office staff who receive the emergency call. In addition, the respective information and service point (porter) for the campus location should be informed by calling the internal emergency numbers. **ALARM CELL PHONE:** The contact persons listed on the alarm mobile phone are the staff of the information and service point on the Alte Technik Campus in Rechbauerstraße 12. These persons are prepared to help you in emergency situations.

EXTERNAL EMERGENCY NUMBERS		TU GRAZ INTERNAL EMERGENCY NUMBERS	
Fire brigade	122	Alarm mobile phone 0-24 h	+43 (0) 664 85 92 365 Landline: *111
Police	133	Alte Technik	+43 316 873 - 6560
Rescue service	144	Neue Technik	+43 316 873 - 6570
Euronotruf – EU emergency number	112	Inffeldgasse	+43 316 873 - 6580

2. **Rescue and escape**: After the alarm has been sounded, it is necessary, if possible, to find out whether people are in danger. In any case, rescuing people takes precedence over attempting to fight the fire. Persons in danger must be warned. Make sure to leave dangerous areas by following the marked escape routes and by using the emergency exits. All doors must be closed behind you. Do not use the lifts if a fire is suspected or occurs. If anyone is trapped in a room, they should alert the emergency services by shouting, making telephone calls, turning up the lights, etc.

3. **Extinguishing**: The available firefighting equipment (fire blanket, fire extinguisher, wall hydrants) should be used to fight the fire only if this is possible and reasonable. If people catch fire, try to smother the flames by using fire blankets or coats, for example (see also Annex 1, Figure 2).

§ 13. Measures that should be taken after a fire

All observations that may help to determine the cause of the fire must be reported to the commander-in-charge of fire brigade, the BSB, and the supervisor.
Hand-held fire extinguishers that were used should be returned to their locations only after they have been refilled and repaired. All fires and the use of wall hydrants or hand-held fire extinguishers, for example, must be reported immediately to the BSB. It is only possible to re-enter the premises affected by the fire after the BSB has approved this re-entry.

§14. Evacuation alarm (house alarm)

An alarm to evacuate or clear the area is sounded if the BSB or an authorised person gives instructions to do so, but in particular if the commander-in-charge of the fire brigade gives instructions to do so. This alarm means that a fire has broken out on the premises or that another hazard exists that requires the building to be evacuated as a precautionary measure. The alarm signal is acoustic (siren) and/or visual (flashing light).
If the evacuation alarm is sounded, the following must be observed:

1. It is essential to remain calm! Announcements that induce panic, exclamations, and erratic actions should be avoided at all costs.
2. Any external persons present (customers, visitors, etc.) must be informed of the escape routes and emergency exits and asked to leave the building.
3. If necessary, machines must be switched off by using the emergency buttons or shut-off valves must be closed in the case of hazardous substances.
4. All staff must leave their workplace immediately and go to the respective protected zone (fire assembly point). This assembly point may not be left until the head of operations or the BSB has indicated that it is safe to do so. The assembly point is indicated on the escape and rescue plans displayed on site. Persons who leave this point without permission must be reported immediately to the fire brigade's commander-in-charge.

§ 15 Fire drill

An important measure that should be followed to prevent panic is to conduct regular fire drills. These are carried out once a semester as part of the fire safety warden training and continuing education. These drills give you the opportunity to familiarise yourself with the fire extinguishing equipment that can be initially used.

ANNEX 1 – WHAT TO DO IN THE EVENT OF A FIRE

Figure 1: Notice "What to do in the event of a fire"

Figure 2: "How to extinguish a fire correctly".

(Source: Federal Ministry of the Interior, Fire Safety Guide)