

Current versions of this document see public folders of RUB-Makerspace at <https://makerspace.ruhr-uni-bochum.de/status/> | This is a fork from Dec. 2023

RUB

RUHR-UNIVERSITÄT BOCHUM

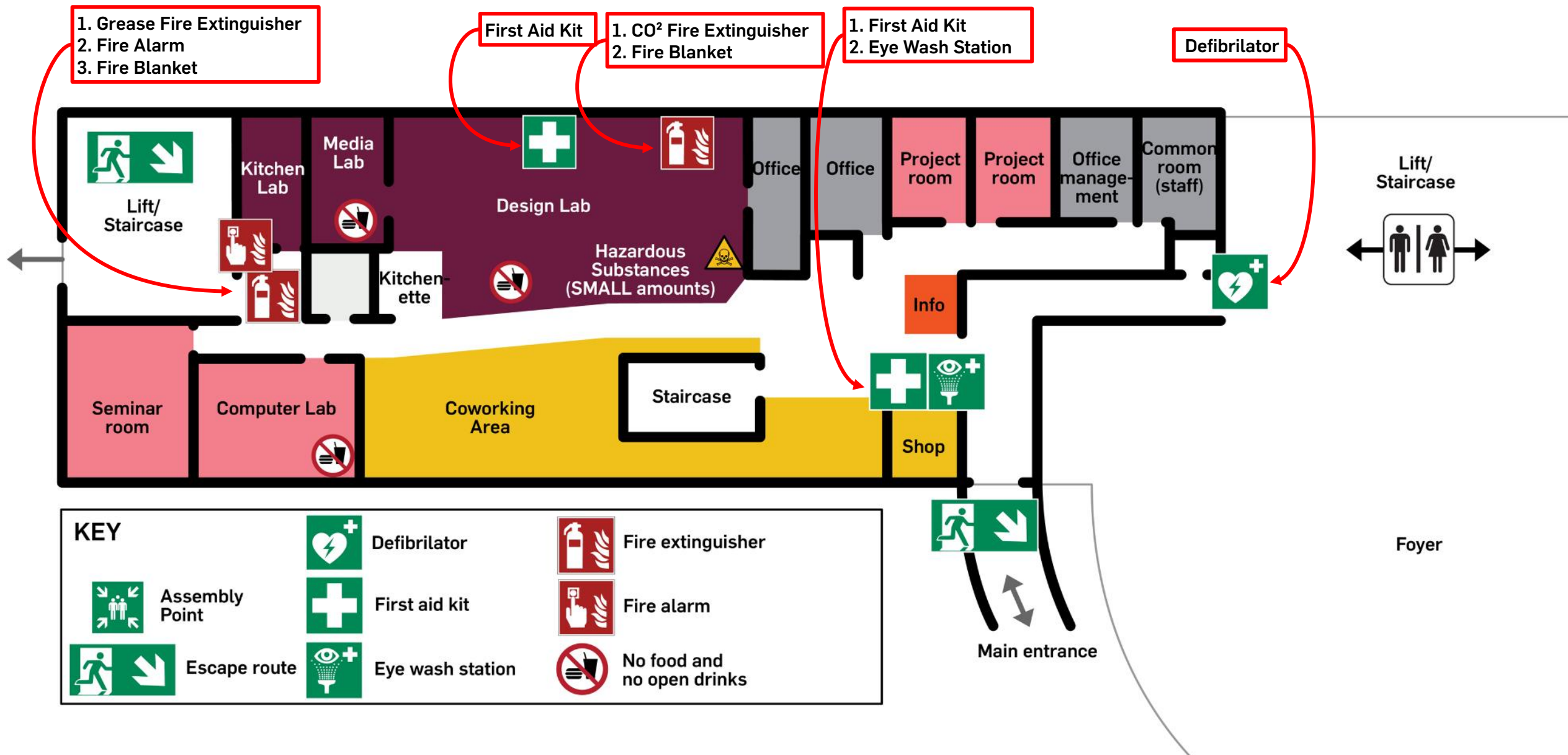
General Safety Instruction

Initial Instruction for Users of the RUB
Makerspace

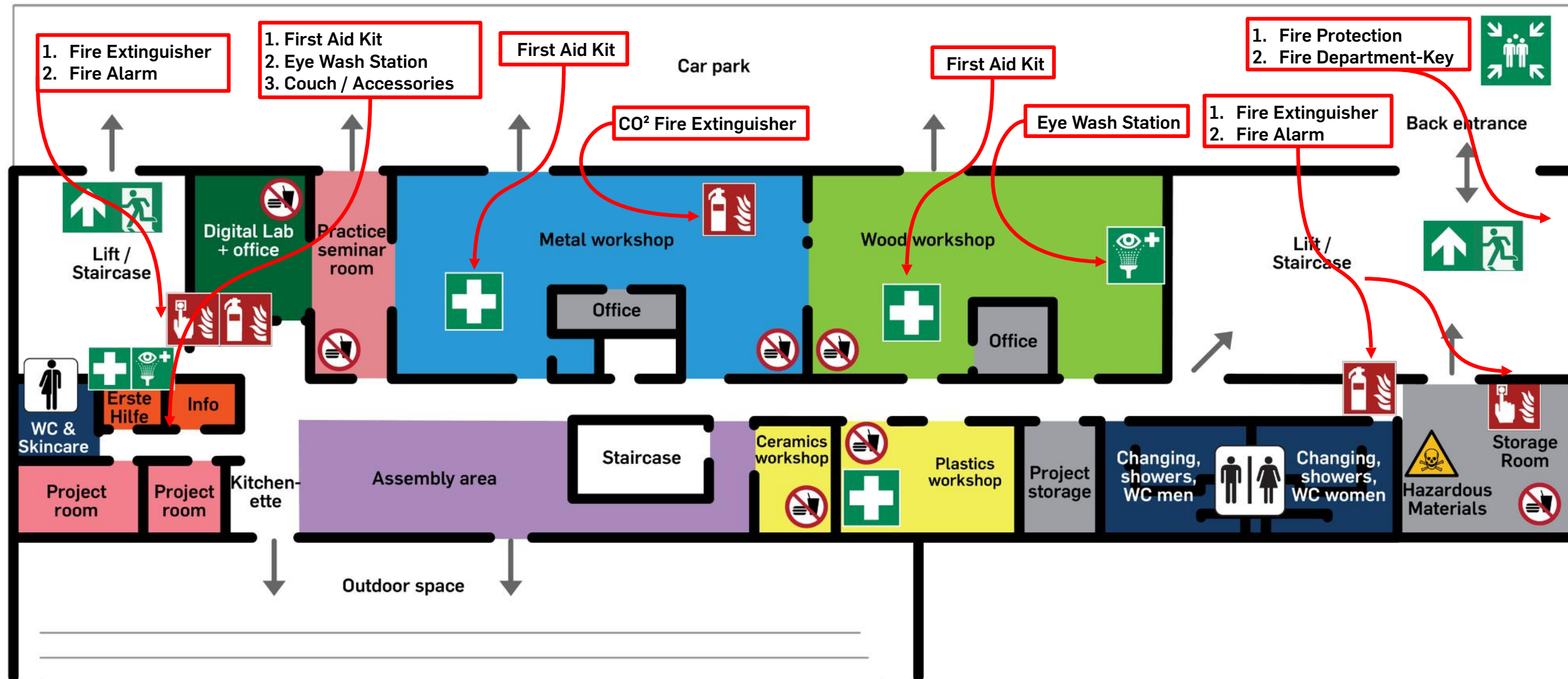
Status: 10.03.2023



Where Is What? TOUR and Map



Where Is What? TOUR and Map



We Are...

- We are the ones with the colorful shirts.
 - We are the ones you can always ask.
 - We are the ones who help you.
 - We are Dirk, Flo, Dietmar, Anna-Lena, Oli, Guido and many, many more.
-
- makerspace@rub.de
 - <https://makerspace.rub.de>



First Things First

- **Ask questions:** If you have any doubts or uncertainties, please do not hesitate to ask us for assistance or clarification.
- **No food or drinks:** Please do not consume food or open beverages in the workshops, labs, or around machines.
- **Don't work alone:** For your safety, please do not work independently with machines or on projects.
- **At your own risk:** You use the Makerspace at your own risk, and are required to have adequate health and personal liability insurance.
- **Be vigilant:** Please be careful and watch out for each other, and report any safety hazards or concerns to the team.
- **Follow the rules:** Please familiarize yourself with and adhere to the User Guidelines posted in the Makerspace.
- **Notify us of any disabilities:** If you have any physical or medical conditions that may impact your ability to participate safely in the workshop, please inform us so that we can identify and minimize individual risks.
- **Respect privacy:** While it is acceptable to take photos/videos for private documentation purposes, please obtain individual consent before any kind of publication - this applies to the team and users alike!



Golden
Rules

A Place for Everyone!

Please give special consideration to:

- Pregnant people
- Children and teenagers
- People with disabilities
- People who need help for other reasons
- "Be excellent to each other"



Safety First!

- Read the operating instructions!
- Read the user manuals!
- Pay attention to the warning labels!
- Report defective machines and devices immediately!
- Keep your workplace clean and tidy!
- Use work equipment as instructed!
- Use the handrail on stairs!
- Do not block escape and rescue routes and do not wedge doors!
- In general: Working alone is prohibited in the Makerspace!



Operating Instructions and Important Documents

Red = Hazardous Substances

Blue = Machinery or Activities

- The operating instructions contain all safety-relevant aspects for the respective machine or activity.
- In addition to the operating instructions, the manufacturer's user manual must also be read.



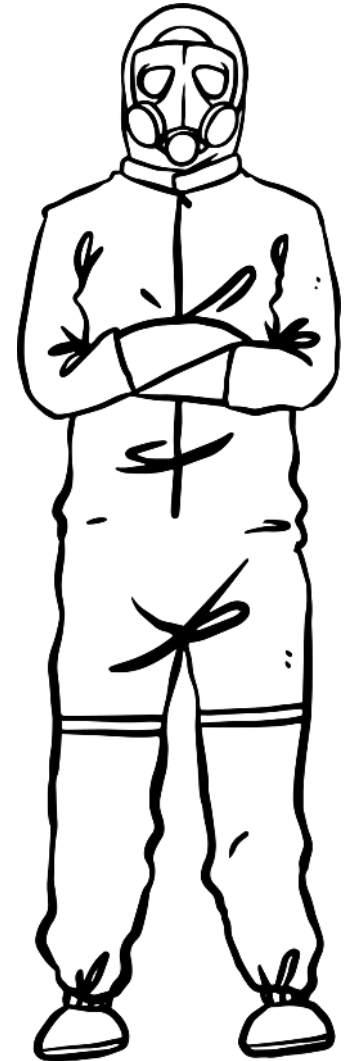
As a minimum, you will find the operating instructions printed out in the Makerspace. All documents and tutorials are also available digitally in work folders, which you will have access to in the future via our website or via QR codes at the devices or on the computers in the Makerspace.

Datum: 10.12.2021		BETRIEBSANWEISUNG Gültig für den Bereich RUB-Makerspace		RUB
GERÄT / BEREICH / MASCHINEN-BEZEICHNUNG				
Akkuschrauber/Schlagschrauber Inkl. Ladegerät und Akku				
GEFAHREN FÜR MENSCH UND UMWELT				
		<ul style="list-style-type: none"> Wenn Haare/Kleidung von rotierenden Werkzeugen erfasst werden. Von Werkstücken mitgerissen und herumgeschleudert werden. Explosionsgefahr bei Überhitzung des Akkus. Eindringen von Wasser in den Akku. Augenverletzungen durch weg fliegende Späne/Teile. Lebensgefährliche Körperströme möglich bei mangelhaftem Akkuladegerät. 		
SCHUTZMAßNAHMEN UND VERHALTENSREGELN				
	<ul style="list-style-type: none"> Nur <u>unterwiesene</u> Personen dürfen den Akkuschrauber benutzen und vor Arbeitsbeginn ist immer eine Sicht- und Funktionskontrolle auf Mängel hin durchzuführen. Die Betriebsanleitung des Herstellers ist zu beachten. Nur Ladegerät mit gültiger Elektroprüfplakette benutzen. Gerät nur bestimmungsgemäß verwenden und zugelassene Ersatzakkus benutzen. Geräte nicht in feuchter Umgebung ablegen, vor Spritzwasser schützen und nicht nass anschalten. Ladegerät nicht am Kabel hochheben und nicht an der Anschlussleitung aus der Steckdose ziehen. Anschlussleitung vor mechanischen Beschädigungen schützen. Werkzeugwechsel nur bei Stillstand des Schraubers. Keine Eigenständigen Reparaturarbeiten durchführen Während des Arbeitens auf geeignete Schutzkleidung und sicheren Stand achten. Lange Haare müssen zusammengebunden oder mit Haarnetz abgedeckt werden. Keine Schmuckstücke, Schals, Armbanduhr o.ä. tragen. Werkstücke fest spannen und gegen Mitdrehen sichern. 			
VERHALTEN BEI STÖRUNGEN & INSTANDHALTUNG				
<ul style="list-style-type: none"> Bei Mängeln oder Störungen Gerät sofort beim Makerspace-Personal melden! Gerät Außer Betrieb setzen und kennzeichnen wenn sicher möglich (im Zweifel immer durch Personal) Sicherheitsdatenblatt und weitere Unterlagen zu Rate ziehen (liegen Maschine bei / bei Personal)! Instandhaltungsarbeiten nur von fachkundigen und beauftragten Personen durchführen lassen. 				
ERSTE HILFE				
	Erste-Hilfe-Kasten Eingang EG, Defibrillator im Flur EG, Erste-Hilfe-Raum im UG! <ul style="list-style-type: none"> Verletzten retten und Erste Hilfe leisten (z. B. Schockbekämpfung, Blutungen stillen, CPR) Bei Stromunfall unter Selbstschutz die Anlage abschalten. Ersthelfende (= Makerspace-Personal) benachrichtigen. Ggf. Notruf absetzen. Unfallstelle sichern. Durchgangssarzt aufsuchen, ggf. relevante Sicherheitsdatenblätter mitnehmen. Dokumentation / Unfallmeldung im „digitalen Verbandsbuch“ (Makerspace-Personal) 			
ANSPRECHPERSONEN UND ERSTHELFER*INNEN FÜR DEN GESAMTEN MAKERSPACE				
	Bereich Metallbau & Sicherheit Verantw. Leitung Stellv. Leitung & IT/ET Holzbauwerkstatt Design- & Medienlabor	Name Axel Neuhaus Dirk Hansmeier Oliver Stickle Anna-Lena Zinnhardt Florian Krohm-Brauckmann	Büro UG 08.01 EG 00.14 EG 00.10 UG 13.01 EG 00.10	Telefon 0234 32 21569 0234 32 29541 0234 32 20633 0234 32 19367 0234 32 29542
Sicherheitsbeauftragt: Dirk Hansmeier Unterschrift der verantwortlichen Person: _____				

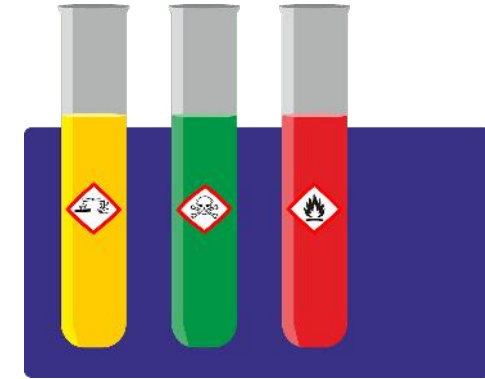


PPE - Personal Protective Equipment

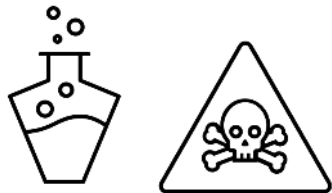
- Do not wear any jewelry or loose-fitting clothing when working on machines.
- Keep long hair and beards securely tied up or covered with a hair net.
- Wear tight-fitting clothing, sturdy footwear and other PPE appropriate to the activity when working. If necessary, you can borrow this equipment (e.g. in the "PPE room").
- Explicitly do not wear gloves with rotating equipment!
- There is a skin protection plan for before, during and after work.
- The current Corona rules of the RUB apply (see notices). Pay attention to the AHA-L rules and wear a FFP2 mask!



Hazardous Substances



- Read **red** operating instructions and act accordingly.
- Hazardous substances are in the hazardous substance cabinets in the Design Lab or in the central storage area (UG) and are only handed out by the staff.
- Hazardous substances brought along may only be used in consultation with and after examination by the staff.
- The quantity to be used is to be reduced to the necessary minimum at the workplace.
- Hazardous substances may only be stored and used in the containers provided.
- Hazardous substances must be used in such a way that any risk to third parties is excluded.



Hazardous Substances that are Used Across Areas

- Superglue
- 2K adhesive
- Spray adhesives
- Cooling lubricants
- Oils



- Possible hazards are e.g.: corrosive vapors, strong adhesive power, danger of poisoning and others.
- Observe operating instructions and safety data sheets!
- Use only in consultation with Makerspace personnel!
- Storage locations are hazardous material cabinets

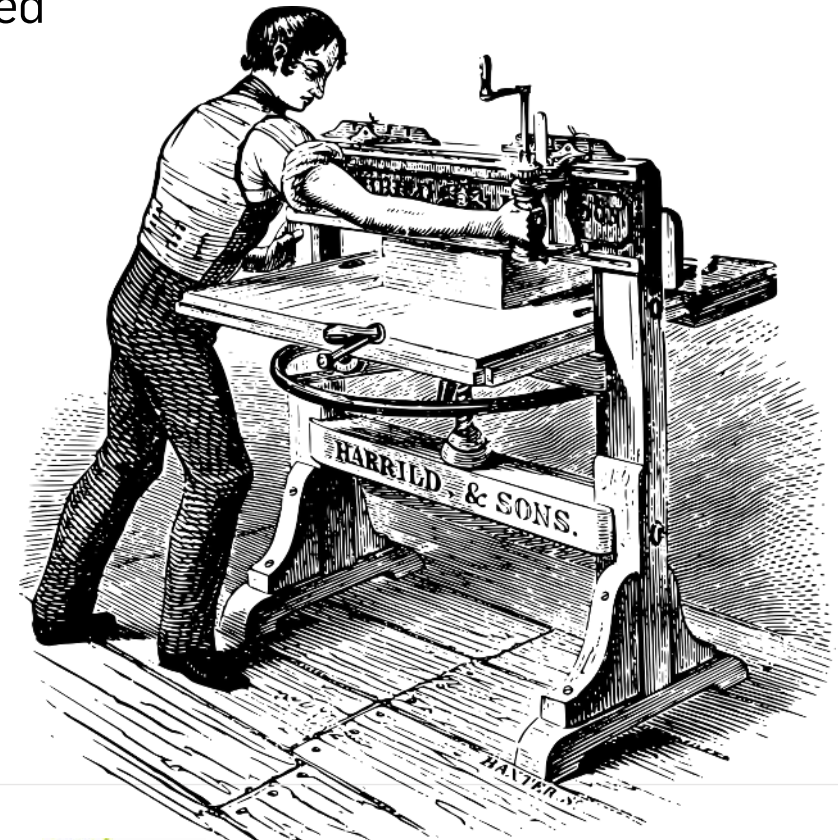
Hand Tools

- Hand tools may only be used as intended and after visual inspection.
- Always use screwdrivers and wrenches of the appropriate size.
- Always perform cutting and stabbing movements away from the body and the hand holding the workpiece. Never leave knives lying around in the open!
- Ensure that the correct PPE is worn. (Gloves, hearing protection, etc.) Tools must not be extended with pipes or similar.
- Sharp or pointed tools must not be carried openly in clothing!
- Secure workpieces and prevent them from rotating!
- Put tools back in their intended place after use.



Machines in the Makerspace

- No one operates a machine without instruction. Not even together with other users who already have received the instruction.
- Even for electrical hand-held machines/devices, you must be instructed before use.
 - Exceptions are:
 - Laptops/printers/etc.
 - cordless screwdriver (no impact drill)
 - Vacuum cleaner
 - Hot glue gun
 - Multifunctional tool like Dremel or Proxxon
 - LED lights
 - Laminator
 - Kitchen appliances
- Be sure to use the equipment properly.
Read the operating instructions!



! Visual Check !

Electrical Safety and Batteries

- Do not use damaged cables, plugs or rechargeable batteries. Immediately report damaged devices, cables or rechargeable batteries to the personnel and take them out of operation.
- Batteries that have been exposed to high heat or have been dropped must not be used for the time being.
- Do not insert plugs into soiled or dusty sockets.
- Dispose of old batteries in the designated containers - ask us about this. The poles must be taped off.
- Store lithium batteries in yellow safety containers only. Take out suspicious batteries IMMEDIATELY!
- Plug batteries only into designated chargers and machines.
- Only connect multi-socket power strips directly to wall outlets.
- Only use extension cables with at least IP44 rating outdoors.





Nothing Can Exist Without Order



Nothing Can Come Into Being Without Chaos

Albert Einstein

- Everyone must ensure order and cleanliness at their respective workplaces. Appropriate utensils (vacuum cleaner, dustpan, etc.) are on site.
 - In some places, e.g. in the Wood Workshop, sweeping is not allowed! Vacuum instead, even for small items!
- Workstations and items are to be tidied up after use.
- Spilled liquids or waste lying around must be disposed of immediately.
- The containers and materials provided for this purpose (e.g. oil binding agents) must be used for disposal.
- Paths must not be obstructed.
- Everything either has a place or is given a place. Projects will be given their place in the project storage area.
- All boxes are to be labeled! (Even project boxes - with names!)



Ladders and Steps

! Visual Check !



- Falling from ladders is imminent:
 - when the ground is loose and slippery,
 - when ladders are placed on only one side,
 - if the setting angle is too shallow or too steep (*correct setting angle between 65°-75°*),
 - due to defective ladders (*in case of defective ladders, contact (management) personnel*),
 - if the ladder base is too narrow,
 - by missing holding possibilities when transporting bulky loads,
 - when climbing from the ladder (*ladder protrusion min >1m if other holding possibilities are missing*),
 - in case of slippery ladder rungs or worn (*treadless*) shoe soles,
 - unsuitable climbing aids, e.g. upturned buckets, chairs (*especially roller chairs*), beverage crates, tool boxes.
- If possible, use stepladders with large contact surfaces for longer periods of work.

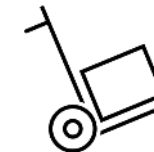
Lifting Carts and Transport Equipment



Axel Neuhaus, Gabelhubwagen, CC BY-SA 4.0

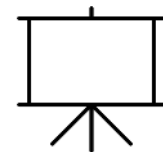
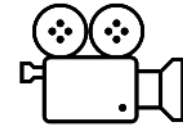
- Before starting: Short check (check for proper function).
- Move loads close to the ground.
- Only park the lifting cart in the marked area.
- Observe the maximum load.
- Observe the load diagram.
- Watch out for persons and objects.
- **Passenger transport and using the lifting cart as a scooter are prohibited!**

- If possible, use aids (rolling boards, plate trolleys, etc.) to transport objects. Never move heavy loads alone.
- Pay attention to the correct posture when lifting and carrying.



IT and Media Technology

- You can, should and may use the **computers** available within the makerspace's public area - User: "makerspace-user" Password: Will be told to you now :) Public computers = principally insecure & data not confidential!
- **Computer Room, LAN, WLAN:** Usage only possible with RUB-LoginID or RUB-event-accounts for guests - contact the team if necessary.
- Network sockets = **HIRN ports**: plug in & unlock at login.rub.de
- Turn on **large screens** on right side & select your source. Source "OPS" = Built-in computer, which can also be used if required. If cables are missing please report!
- We also have **laptops** for workshops & guests without equipment.
- **Beamer at the stage** may only be operated after instructions & handle CAREFULLY (strong laser - danger for eyesight!).

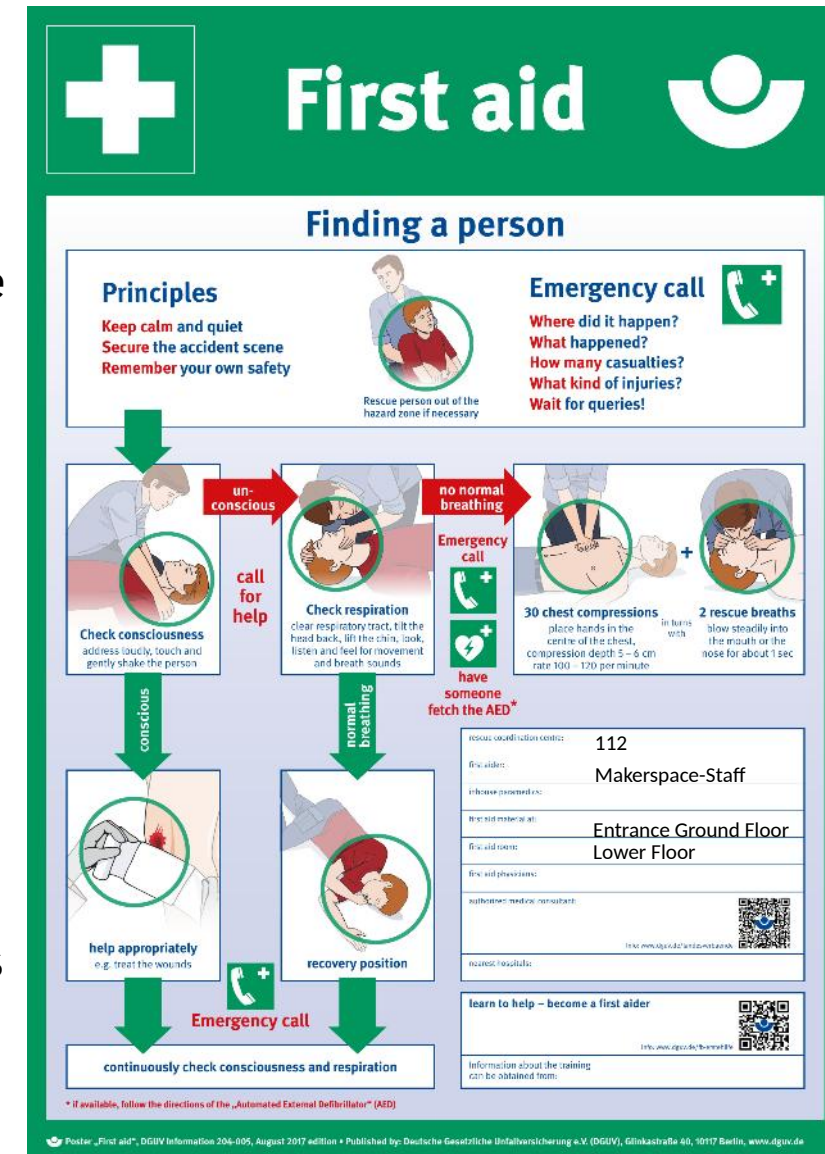
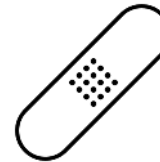


Specify "O-Werk" as address What to Do in an Emergency?

112



- We are all first responders and fire safety assistants. Call us for help in case of emergency!
- In case of fire alarm, immediately go to the assembly point and follow the instructions of the staff!
- The Makerspace has a central sprinkler system.
- The first aid room is located in the basement.
- First aid kits are located at the entrance on the ground floor and in the workshops on the basement.
- A defibrillator is located in the main ground floor hallway (next to the men's restroom).
- Do not extinguish batteries yourself. If possible, extinguish electrical devices with CO² extinguishers.
- Self-protection takes precedence over the protection of others.



User Administration & Access Control System

- After this instruction, you will be registered in "Fabman", our system for user and device administration.
- For this purpose, you will receive a form and an information and consent form for data protection.
- You will receive an ID card, which you must carry with you to work in the Makerspace.
- Certain devices will be unlocked by ID card (but not yet after today's instruction).
- Please use the check-in feature at the terminal at the front desk when you arrive at the Makerspace. Check-out as you leave.
- The system is still under construction and subject to change.
- For "power users" Fabman has even more features - see <https://fabman.io> or talk to us.



Take-aways

- Have fun, be creative - but work safely, sensibly and be attentive!
- Keep asking us questions! Anytime!
- After this instruction you may:
 - work independently in the Makerspace during opening hours,
 - use the hand tools, a few power tools (cordless screwdriver, vacuum cleaner) and the general resources (monitors, project storage, etc.) in the RUB Makerspace,
- After this instruction you are not allowed yet:
 - work with hand-held or other machines of the Makerspace
- Follow the user guidelines!
- Bring your ID card to work with you. Do not forget to check-in and check-out!

QUESTIONS?

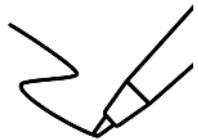
Thank You for Your Attention

Now:

Sign the **documentation form!**

And:

Create or update your **Fabman ID-card**



Internet and Social Media



makerspace@rub.de



<https://makerspace.rub.de/>



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