

Laboratory regulations

The regulations at hand consist of rules resp. references of rules to comply with operational safety and health instruction.

The laboratory regulations should guarantee a safe and unendangered work in proper form.

The safety regulations apply to all members of the research group (assistants, students, visiting scientists, contributory guests) and are recognized as operating instructions according to 'BGR 120- Richtlinien für Laboratorien'. The notice of this laboratory regulations have to be acknowledged by a signature.

1. Safety Regulations

The laboratory is considered as 'elektrische Betriebsräume' according to VDE regulations. Working in the laboratory is only permitted after a briefing, which has to be confirmed in written form. The university is not liable or responsible for personal and material damages caused by negligent or deliberate behaviour. Claims for compensation from the chair and the department are not possible.

Every member of the chair and department is encouraged to inform themselves about the location of fire extinguishers and first aid kits. The boards about directions for first aid and the rules for accident prevention (a copy may be found in laboratory MB 326) should be paid attention to.

Additionally to this laboratory regulation, the following documents should be noted:

- User manuals according to § 20 GefStoffV
- safety datasheets
- safety manual of the Gerhard-Mercator-Universität Duisburg.

- 1.1 All orders resp. arrangements concerning safety have to be followed resp. encouraged. Mr. Dipl.-Ing. H. Lissen is in command concerning safety in the field of mechanics/electronics and Mr. K. Thelen in the field of hydraulics.
- 1.2 If any construction or component does not work properly, the responsible assistant has to be informed immediately.
- 1.3 Changes of electrical circuits have to be made in idle condition. Energized electrical circuits have to be watched at all times. If this is not possible, a caution label has to be mounted.
- 1.4 Working with
 - voltages above 50 V
 - opened electrical devices or experimental setups including an exposed power supplies
 - devices whose protective cover has been removed temporarily for measurement reasons

as well as presence in room containing constructions under pneumatic or hydraulic pressure is only allowed if a second person is present. Outside the business-hours (Mo. – Fr. between 7.30 am – 4.00 pm) at least one faculty member, staff or research assistant has to be present under the circumstances listed above.

- 1.5 Wear form fitting clothes when working with plants including rotating parts (ties, shirts sleeves may be caught by rotating parts and cause serious injuries). Wearing jewelry (e. g. chains, rings) is not allowed.
- 1.6 The valves to limit the pressure in experiments using hydraulic units may be modified only after consulting the responsible assistant or a faculty member.

In case of calibrating a shaft to measure a torque, the test unit and the pressure vessel have to be disconnected.

Existing Plexiglas cover may be removed only during assembling or modifying an experimental setup if the plant is depressurized.

Wear noise protection if the noise exceeds 85 dB.

- 1.7 Before leaving the work place, disconnect any experimental setups from the power supply. Particularly, pneumatic and hydraulic plants have to be shut down and depressurized.
- 1.8 The laboratory and the equipment in the laboratory have to be handled with care. If the work is finished, the laboratory has to be cleaned up, and the windows and doors have to be closed.
- 1.9 Smoking is prohibited in the laboratory. In all other rooms smoking is only allowed with the permission of present non-smokers.

2. Working hours

Working in the laboratory is restricted to the official business hours (Mo. - Fr. between 7.30 am - 4.00 pm). Students are only permitted to continue their work out of official business hours for internal reasons. The responsible assistant decides whether a second person has to be present without prejudice 1.4.

3. Computers, Devices and Tools

Computers, devices and tools have to be handled with care. Damage has to be reported to the responsible assistant immediately. The receipt of devices, tools or documents has to be acknowledged by a signature.

- 3.1 Devices and tools are handed out by the technical staff. Before initial operation the operating instruction have to be read.
- 3.2 Taking of devices, tools etc. from other workplaces is only permitted if authorized by the responsible assistant.
- 3.3 If the work is interrupted for more than four weeks, the tools, devices, manuals etc. and borrowed keys have to be returned. The workplace in the laboratory has to be cleaned up.
- 3.4 Students using computers have to prove satisfactory knowledge about programming and operating a computer. The regulations for operation a computer

have to be complied. Therefore these regulations become part of the laboratory regulations (see attachment).

4. Repair and Photo works

Repair and photo works are done only by the technical staff. Exceptions are determined by the responsible assistant.

5. Components, Material, Orderings

- 5.1 All material has to be dealt with care and has to be cut in such a way that clipping is minimized.
- 5.2 Electric, pneumatic and hydraulic components have to be used with respect to their characteristics. Compensation has to be paid in case of careless or willful damage of the equipment.
- 5.3 Components and material are handed out by the technical staff after consultation with the responsible assistant.
- 5.4 Orders by students without authorization by the chair are not liable.

6. Miscellaneous

- 6.1 Note the library, borrowing and workshop regulations of the research group 'Dynamics and Control'.
- 6.2 Questions concerning project, bachelor or master works are treated by a separate bulletin.
- 6.3 Non-members of the research group are not authorized to act or speak on behalf of the group.

If in doubt, ask the responsible assistant or Univ.-Prof. Dr.-Ing. Söffker to get further information.