IDSC Frazzoli Lab Rules

General Workspace Conduct

Clothing and protection

- Wear appropriate clothes and closed shoes. Reduce jewelry to a minimum.
- Wear safety glasses when working with compressed air, power tools (e.g. the drill press), chemicals or similar hazards.
- Always wear ear-protection in loud surroundings.
- Wear protective gloves when working with aggressive chemicals. DO NOT wear gloves when working with rotary machines (e.g. a drill).
- Wear breathing masks when working with vaporized chemicals or dusty materials.

Electrical hazards

- Voltages above 50 V may kill you. You are not allowed to work with voltages above 50V.
- Exposed, uninsulated electrical parts that may carry a voltage have to be marked. Such marked parts must not be touched.
- Do not handle liquids near electronics.
- Never bypass, modify, repair, or change protective devices (fuses, safety switches, etc).
- Always disconnect electrical devices from electrical power sources before any manipulation.
- Immediately report any cable, plug or apparatus defects to a supervisor. Under no circumstances should you attempt to repair a defect yourself.

Compressed Air

- Always wear eye protection when working with compressed air (there is a danger of eye injuries from flying particles).
- Never direct compressed air at yourself or others. It can result in serious injuries such as hearing loss or bodily wounds.
- Do not use compressed air to clean machines. Vacuum machines instead.

Machines with Rotating Parts

- When working with rotary machines, wear tight-fitting clothes. Do not wear wide pullovers, flapping coats or scarves. Do not wear jewelry.
- Long hair must be worn so that it cannot, under any circumstance, come into contact with rotating machinery (use a hair net, wear hair in a tight bun, etc.).
- Do not wear gloves. They could get caught in the machine.
- Never support yourself with your hands on machine parts or workpieces. Never grab a running machine with your hand.
- Check that work pieces are properly secured (e.g. in a vice) before machining.

Dübi Lab

General

- Everyone knows his role and duties (see Responsibility Matrix).
- At least two people must be in the hangar at all times in order to operate the go-cart. One of them has to take the role of the safety officer.
- A handwritten logbook is dedicated to the go-cart. Every modification to the go-cart (hardware and software), every experiment, observations on the behavior of the go-cart, the procedures undertaken, and any eventualities will be recorded. Before carrying out an experiment, the purpose of the operation and the expected behavior of the go-cart must be communicated.
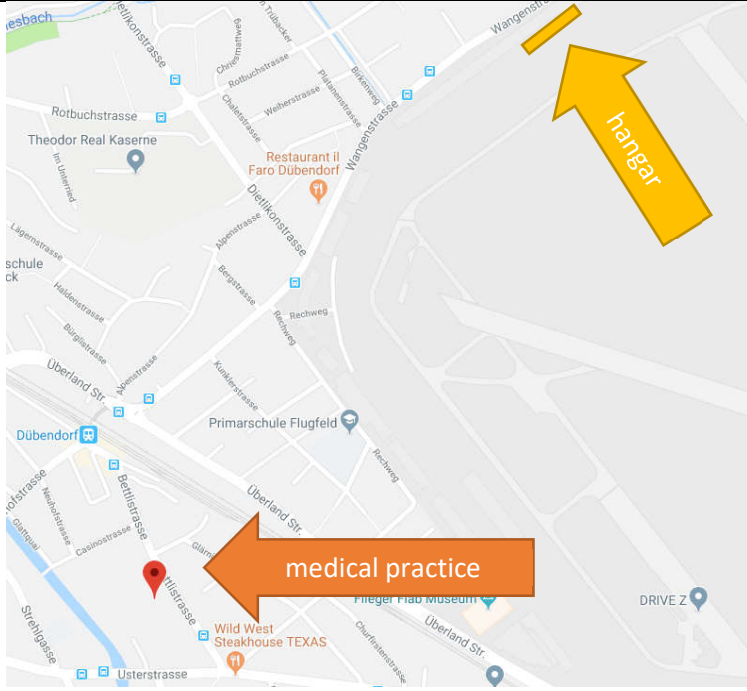
Responsibility Matrix

Safety officer	-makes sure the lab rules are followed -decides if a safety driver is fit to drive -makes sure the go-cart and the test track are in a useable condition -can stop / deny tests at any point for safety reasons -sets up warning signs before tests, informs externals about the tests if needed -operates the wireless emergency button or hands this position over to another person
Safety driver	-knows how to stop the go-cart (mechanical brake) -knows how to set the go-cart power free (emergency button) -knows how to take over control over the go-cart -knows what the tests he his driving are concerned with -knows the expected test results and driving pattern
Everyone (IDSC people)	-follow the lab rules -know where the fire extinguishers and first aid kits are
Externals (non IDSC people)	-have to be informed about the test -the safety officer makes sure that externals stay away from danger (driving area, power tools, etc.)

Test Track

- The go-cart must not be in autonomous mode before it arrives on the test track.
- The emergency functionality (wireless emergency stop, emergency stop button) must be tested once each day before any test with the go-cart begins.
- The track and the go-cart must checked for visible damage and obstacles before each test.
- The go-cart must not be in autonomous mode before it arrives on the test track.
- Nobody is permitted to be on the track during driving tests.

IDSC Frazzoli Lab Rules

Numbers & Adresses

Dübi Lab	DFA Wangenstrasse 72 8600 Dübendorf Telefon: 23038	
ETH Emergency Desk	+41 44 342 11 88 888 (ETH intern)	The ETH Emergency Desk is the contact point for all incidents connected with the personnel, building, and equipment security systems. The Emergency Desk can be contacted 24 hours a day. Reporting an emergency: • Who is reporting the emergency? • What kind of emergency is it? • When and where is the emergency taking place? • How many people are affected?
Emergency medical physician	+41 800 33 66 55	
Ambulance	(0)144	
Medical practice	**Praxis Gruppe Dübendorf** Bettlistrasse 28 8600 Dübendorf Tel. 044 821 62 14 Fax 044 821 61 20	
Fire brigade	(0)118	
Poisoning	(0)145	(Toxicology Information Centre)
Police	(0)117	

IDSC Frazzoli Lab Rules

Auto Lab

General

- Beside the Duckietown mayor there has to be a chief officer for tools. The officer is responsible for the 3D printer and the lab tools. No one is allowed to make changes to the printer (set ups, materials, etc.) without getting the permission of the chief officer for 3D printing. The officer makes sure that all tools are available and in good condition. He also makes sure that the students know how to use them right.
- The doors to the Autolab and it's control rooms have to be closed when no person is in these rooms.

Notes

Privacy note

The autonomous projects that are operated at the institute containing cameras. These cameras will record images as they will be needed for the control algorithms to work.

The camera data might be recorded and these records might be stored. The purpose of this is to analyze the data later or to use it to train computer algorithms.

The recorded data will be stored while the project is running and will only be used for the said internal purpose. If data is used for lectures or in public, it will be anonymized.

IDSC Frazzoli Lab Rules

Emergencies

- The ETH Emergency Desk is the contact point for all incidents connected with the personnel, building, and equipment security systems. The Emergency Desk can be contacted 24 hours a day.
- Reporting an emergency:
  - **Who** is reporting the emergency?
  - **What** kind of emergency is it?
  - **When** and **where** is the emergency taking place?
  - **How many** people are affected?

Emergency numbers

- **ETH Emergency Desk** (from internal phones): 888
- **ETH Emergency Desk** (from external or mobile phones): +41 44 342 11 88
- **Fire brigade**: (0)118
- **Ambulance**: (0)144
- **Poisoning** (toxicology information centre): (0)145
- **Police**: (0)117

If a severe accident happens you start here in order to save time

Feuer – was tun?
Fire – what to do

1. **Alarmzentrale anrufen**
   Call the Emergency Desk — 888 ETH

2. **Sich und andere retten**
   Alert others and evacuate

3. **Türen schliessen**
   Close all doors

4. **Brand bekämpfen**
   Fight the fire

Alle Notfälle / All emergencies: 888
Extern / External: 044 342 11 88
ETH Zürich, SGU, www.ethz.ch/sgu

Unfall – was tun?
Accident – what to do

1. **Alarmzentrale anrufen**
   Call the Emergency Desk — 888 ETH

2. **Schweren Unfall melden**
   Report severe accident — 0-144

3. **Erste Hilfe leisten**
   Administer first aid

Alle Notfälle / All emergencies: 888
Extern / External: 044 342 11 88
ETH Zürich, SGU, www.ethz.ch/sgu

IDSC Frazzoli Lab Rules

Please fill out the following form and return this page to your groups administration.

Name: _____

(Forename / Surname)

ETH number: _____

With your signature, you acknowledge that you read and understood the rules and safety guidelines in this document (IDSCFrazzoli Lab Rules - v0.0.docx).

Date: _____ Signature: _____