



# **FORMULA STUDENT SWITZERLAND**

Formula Student Switzerland

Handbook 2020

*Version 1.0*

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## **CH 1 General Informations**

### **CH 1.1 Competition**

CH 1.1.1 There will be only one competition organized for Formula Student Switzerland (FS Switzerland), that is the Electric Vehicle (EV) class.

### **CH 1.2 Competition Dates and Place**

CH 1.2.1 FS Switzerland 2020 will be held from 15th until 19th of July 2020.

CH 1.2.2 Address:  
Switzerland Innovation Park Zürich  
Wangenstrasse 68  
8600 Dübendorf  
Switzerland

### **CH 1.3 Competition Website**

CH 1.3.1 The official competition website is: <https://www.fsswitzerland.ch>

### **CH 1.4 Vehicle Shipping**

CH 1.4.1 Teams are advised to consult their shipping company or freight forwarder to ensure that their shipment fully complies with all relevant customs, import/export and aviation shipping requirements

CH 1.4.2 Customs and other paperwork like ATA Carnet, inspecting shipments as well as reporting and documenting damage of the shipment has to be done by the team. [More Informations](#)

CH 1.4.3 Teams, which can't make an ATA Carnet, will be advised to contact us for a Customs declaration for temporary admission.

CH 1.4.4 All teams using an external shipping or freight forwarder must coordinate the transport with the FS Switzerland Organisation. Contact us on info@fsswitzerland.ch



## CH 2 Registration

### CH 2.1 Team Registration

- CH 2.1.1 The team registration will take place in the form of a quiz. The topic for the quiz is: Formula Student Rules 2020 and basic engineering knowledge.
- CH 2.1.2 All Important informations for the registration quiz you find here: <https://www.fsswitzerland.ch/registration2020/>
- CH 2.1.3 Teams must create a team account on the competition website. The deadline for this is 24h before the registration starts (see CH 3.1). Only one member of a team may complete the registration quiz.
- CH 2.1.4 Only one question will be visible at a time and can only be answered once.
- CH 2.1.5 The next question will be unlocked within between 3 min to 15 min.
- CH 2.1.6 Quiz results are based on correct amount of questions answered. If teams have the same amount of correct answers, results are ordered on quiz time starting from the opening of the quiz. (see CH 3.1).
- CH 2.1.7 Once the quiz has been successfully completed, the team must register the team for the competition by agreeing to the rules and by selecting a free vehicle number between 01 and 99.
- CH 2.1.8 No feedback, if the answer was correct, will be provided until the results are published.
- CH 2.1.9 The quiz ends at around 11:00 CET. The result of the registration and the waiting list will be published at about 20:00 CET.
- CH 2.1.10 Reserved slots (see CH 2.2.2) will be assigned to the teams. All unused reserved slots will be assigned to all other teams, with regard to their quiz result.
- CH 2.1.11 All assigned teams will be placed on the pending list on the competition website. In order to move to the participating list, they have 7 days (168h) to pay the registration fee (see CH 2.3). Once all slots have been filled, all additional teams will be placed on a waiting list (see CH 2.4). The period to pay the registration fee starts 2020-02-03 8:00 CET.
- CH 2.1.12 The technical inspection order at the competition will be based on the quiz result.

### CH 2.2 Registration Slots

- CH 2.2.1 FS Switzerland 2020 is limited in total to 25 EV slots.
- CH 2.2.2 Reserved slots will be assigned to the following teams: Four teams from Switzerland
- CH 2.2.3 All remaining and unused reserved slots will become available for all other teams after the registration quiz has been closed on the registration website.



### **CH 2.3 Registration Fee and Campsite Fee**

- CH 2.3.1 The Registration fee is 2000 € and includes a 20-person team. More team members can be registered for 50 € per participant with the TMRF deadline (see CH 3.2). Team members may register after this deadline for a fee of 100 € per participant. There is no limit in team size and no deadline for late bookings.
- CH 2.3.2 The registration fee must be paid within 7 days. All pending teams will get an invoice on until 2020-02-03 8:00 CET.
- CH 2.3.3 Teams which didn't pay will get de-registered and the next team from the waiting list will move to the pending list. Teams which were de-registered and decide again to register, will be placed on last order in the waiting list.
- CH 2.3.4 Registration fees are not refundable for any reason.
- CH 2.3.5 The Campsite fee will be announced. (between 50 - 100 € per person.)

### **CH 2.4 Waiting List**

- CH 2.4.1 Teams on the waiting list may move to the participating list until 2020-07-03 18:00 CEST. This is possible if a registered team withdraws from the competition. Once a slot on the participating list has become available again, the next team on the waiting list will move to the pending list and has 7 days to pay the registration fee in order to move to the participating list.
- CH 2.4.2 The top five Teams at any time on the waiting list are required to submit all documents and forms by the same deadlines as teams on the participating list. Teams, which enter later the top 5 have one week to upload all missing document.
- CH 2.4.3 Teams on the waiting and participating lists who find that they will not be able to attend the competition are requested to officially withdraw by notifying the officials. (Mail to: [info@fsswitzerland.ch](mailto:info@fsswitzerland.ch))

### **CH 2.5 Team Member Registration Form (TMRF)**

- CH 2.5.1 The Team Member Registration Form has to be uploaded until the deadline. (see 3.2)
- CH 2.5.2 If there are changes to the Team Member Registration Form, the whole Form has to be send to: [info@fsswitzerland.ch](mailto:info@fsswitzerland.ch)
- CH 2.5.3 With the TMRF a Valid Health Insurance Certificate (HIC) for Switzerland (e.g. travel insurance) have to be attached.
- CH 2.5.4 All participants will get a personalized standard terms to the team address given at the creation of the team account. This document must be printed out, signed by the participant and brought to the on-site registration.

### **CH 2.6 Visa for Participants**

- CH 2.6.1 If your team or team members require a letter of invitation to obtain a VISA, please send an e-mail to [info@fsswitzerland.ch](mailto:info@fsswitzerland.ch)





#### **CH 4.4 Welding and Power tool**

- CH 4.4.1 FS Switzerland provides a welding and power tool area. It is possible to weld with own equipment in the welding area only, using appropriate safety gear.
- CH 4.4.2 The welding and power tool area, will be overwatched and can only be used during the opening hours.

#### **CH 4.5 Team Briefing**

- CH 4.5.1 Team Captain, all ESOs and drivers for that day are required to attend the team briefings.

#### **CH 4.6 Technical Inspection Time Schedule**

- CH 4.6.1 The technical inspection parts pre-inspection, accumulator inspection, mechanical inspection, electrical inspection will be conducted within a strict time schedule where every team will get a predesignated time slot based on the registration quiz order. The time schedule will be published on the website before the start of the competition.
- CH 4.6.2 The length of these slots is 2 hours for accumulator inspection, 1.25 hours for mechanical inspection, 20 minute for pre-inspection and 2.5 hours for electrical inspection.
- CH 4.6.3 A team can enter the inspection bay 5 min in advance of the start time.
- CH 4.6.4 If a team shows up later than 15 min after the start time, it will loose its time slot and will be put last in the respective inspection order
- CH 4.6.5 After the end of a time slot a team has 5 min to clear the inspection bay for the next team.
- CH 4.6.6 Teams can announce, that they need more time to prepare the car for the technical inspection and ask for a new time-slot.
- CH 4.6.7 Teams that don't show up for their inspection slot and didn't announced it until 15 minutes prior to the beginning of the slot will receive a penalty of 5 points.

#### **CH 4.7 Pre-Inspection**

- CH 4.7.1 Pre-Inspection and driver Egress will be conducted in the pit, where the technical inspectors will visit the teams according to a predesignated time slot based on the registration quiz.
- CH 4.7.2 A team that is not present or ready can arrange a new appointment at the event control.
- CH 4.7.3 Pre-inspection must be completed latest before the tilt test.
- CH 4.7.4 The driver egress is mandatory for all drivers. Before participating in a dynamic event, the driver must have passed the egress test.



#### **CH 4.8 Re-Inspection**

- CH 4.8.1 The re-inspection for the mechanical and electrical will take place in the technical inspection area and the accumulator re-inspection will take place in the accumulator tent.
- CH 4.8.4 The re-inspection will be handled according to the “first-in-first-out-principle”.
- CH 4.8.5 The re-inspection slots have no fixed starting times, but are limited to 30 min duration.
- CH 4.8.6 If more than 30 min is needed the team must queue again for another re-inspection.

#### **CH 4.9 Accumulator Inspection**

- CH 4.9.1 Accumulator inspection will take place in the accumulator tent.
- CH 4.9.2 All TS accumulators need to be brought to the accumulator tent between Tuesday 2020-07-14 17:00 CEST and Wednesday 2020-07-15 12:00 CEST.
- CH 4.9.3 If a team misses the deadline, a penalty of 10 points is deducted of its overall score for every commenced 12 hours up to a maximum of 30 penalty points.
- CH 4.9.4 The team has to register the accumulator delivery at the accumulator tent.

#### **CH 4.10 Rules**

- CH 4.10.1 FS Switzerland 2020 will comply with the "Formula Student Rules 2020" (FS Rules) published by Formula Student Germany here: <https://www.formulastudent.de/fsg/rules/>
- CH 4.10.2 FS Rules together with this handbook form the regulations for FS Switzerland. In case of ambiguity to the FS Rules, the FS Switzerland Rules are given priority over the FS Rules.
- CH 4.10.3 All rules questions regarding FS Rules must be asked using the FSG rules tracker at <https://www.formulastudent.de/officials/rules-questions/>. As FS Switzerland officials have access to this tool, only rules questions and FAQ from FSG will be accepted at FS Switzerland 2020.
- CH 4.10.4 All rules questions regarding this handbook must be asked via [rules@fsswitzerland.ch](mailto:rules@fsswitzerland.ch)

### **CH 5 Statics Events**

#### **CH 5.1 Engineering Design**

- CH 5.1.1 The Engineering Design event will be held according to section S3 of the Formula Student Rules 2020.
- CH 5.1.2 There will be Engineering Finals. The number of teams in the final, will be announced.



## **CH 5.2 Cost and Manufacturing**

CH 5.2.1 The Cost and Manufacturing event will be held according to section S2 of the Formula Student Rules 2020.

## **CH 5.3 Business Plan Presentation**

CH 5.3.1 The Business Plan Presentatio event will be held according to section S1 of the Formula Student Rules 2020.

CH 5.3.2 There will be Business Plan Presentation Finals.

CH 5.3.3 Deep Dive Topic will be announced in a later version.

# **CH 6 Dynamics Events**

## **CH 6.1 Dynamic Area and Dynamic Vests**

CH 6.1.1 The Charging area is a separated dynamic area including separate entrance restrictions.

CH 6.1.2 Only four members per team may enter the Charging Area and the Dynamic Area at the same time. They have to wear the dynamic vest in both areas. One of them must be an Electrical System Officer (ESO). Each team gets four dynamic vests.

CH 6.1.3 Inside the charging area, team members must not wear any conductive jewellery and must not wear any conductive objects of any kind which could touch the accumulator.

## **CH 6.2 Dynamic Disciplines**

CH 6.2.1 The Skid Pad Event will be held according to section D4 of the 2020 FSG Rules.

CH 6.2.2 The Acceleration Event will be held according to section D5 of the Formula Student Rules 2020.

CH 6.2.3 The Autocross Event will be held according to section D6 of the Formula Student Rules 2020.

CH 6.2.4 The Endurance Event will be held according to section D7 of the Formula Student Rules 2020