

**DEAR ALUMNI,  
YOUR TIME IS NOT OVER!  
FS EAST IS COUNTING ON YOU! WE ARE PREPARING  
AN OPEN STYLE COMPETITION FOR YOU  
AT FS EAST 2023.**

# **FS EAST ALUMNI CUP RULES 2023**





## 1. INTRODUCTION

Formula Student East® (hereafter “FS East®”) is a FSAE style Formula Student engineering competition in Hungary, organised by the Association of Automotive Engineers (formerly Engineers for the Automotive Higher Education Association) from 2016.

Formula Student East Alumni Cup (hereafter also AC) will allow to participate vehicles from previous years with conventional internal combustion engine (gasoline or ethanol fuelled) and electric powertrain. The special rule set will be defined in this document and applies to every team applied for the AC. These specific rules are changes and/or additions to the Formula Student Rules 2023 document (hereafter “Rules 2023”) published by Formula Student Germany (<https://www.formulastudent.de/>) and applicable for 2023. In case of a conflict between the FSG Rules 2023 and the 2023 FS East Alumni Cup rules, the 2023 FS East Alumni Cup rules supersede the FSG Rules 2023.

## 2. GENERAL

### 2.1 COMPETITION DATES AND PLACE

FS East Alumni Cup 2023 will be held between 1<sup>st</sup> and 6<sup>th</sup> of August together with the FS East 2023 at the Hungaroring racetrack in Mogyoród.

### 2.2 OFFICIAL LANGUAGE

The FS East official language is English.

### 2.3 OFFICIAL TIME

The FS East official time:

From Till Time

25 October 2021 - 27 March 2023 Central European Time (CET)

28 March 2023 - 30 October 2023 Central European Summer Time (CEST)

### 2.4 REGISTRATION

The pre-registration period starts on the 06.02.2023.





Please register your team at <https://login.fseast.eu/alumni/register>

The person registering the team will be automatically the contact person and team leader which can be changed before the event.

Additionally, you can send your creative application to the [hello@fseast.eu](mailto:hello@fseast.eu) (#specialaward).

Once your application is accepted you will be informed about the next steps. The older the participating car the higher priority it has during registration and with getting the reserved spots. The registration period ends on the 1<sup>st</sup> of April 2023 and the official starter list will be published.

## 2.5 FEES

The registration fee for the alumni cup is a symbolic 300€ (excl. VAT). This covers the operational cost and the slot reservation. This fee shall be paid until the 1<sup>st</sup> of May, otherwise the team will lose its reserved slot.

The camping and catering will be complimentary for the volunteering alumni participants.

## 2.6 PARTICIPATION

No alumni team member can be active in any formula student team.

It can lead to disqualification of the person and penalty for the team(s).

The alumni cup members are only allowed to work on their alumni cars.

Working at other pits can lead to disqualification of the member and penalty for the team(s).

Participation in the following categories will be affecting the total earned points and counts as volunteering at the FSEast2023: Static judge, Scrutineer, Dynamic support, Event support.

Special awards can be expected based on the number of volunteers of the respecting team.

All alumni participants are invited to any recreational event held for volunteers.

The registration for team members will be officially open from the 01.05.2023, where the team captains will be informed about.

## 2.7 EVENT HANDBOOK

The FS East event handbook may contain special event procedures and restrictions for example regarding working on the car etc. It must be read and understood by all event participants.

## 2.8 UNSPORTSMANLIKE CONDUCT

Unsportsmanlike conduct, intentional deception of an official, or dangerous irresponsible behaviour will be reason for instantaneous disqualification.

## 2.9 TESTING AND WORK SAFETY

FS East is not responsible for the use of the cars other than at the event in Budapest.

Furthermore, the organizers of the FS East dissociate themselves from all activities of the teams besides FS East and associated events.





Nevertheless, all teams are advised to follow common practices and common sense when working on the vehicle and when operating the vehicle, also before and after the FS East event. Cars designed and manufactured for the participation of Formula Student events should not participate in events not suitable for Formula Student vehicles like hill climbs, drag races or similar events.

Teams should never use their cars for wheel-to-wheel races.

The following listed requirements should at least be met to qualify as a safe testing/driving environment,

but does not mean that following these guidelines guarantees safety under all circumstances.

- Driver wearing full protection gear incl. arm restraints.
- Working TSAL, IMD, BMS/AMS, Torque Encoder plausibility check, torque/brake encoder plausibility check, brake system plausibility device, ETC plausibility check, ASSI and EBS if applicable.
- Rules compliant frame/monocoque
- Mounted impact attenuator
- No wheel-to-wheel racing
- No other passenger cars, trucks etc. being driven on the same premise at the same time, unless the area is clearly separated.
- No driving under low visibility conditions
- No driving at speeds above typical event speeds, see Part D of the FS Rules for details.
- No driving in areas where crashing into obstacles at the height of the driver's head is possible, such that parts of the vehicle may pass below an obstacle, but the driver's head can be trapped between the obstacle and the main roll hoop for example.

FS East reserves the right to disqualify a registered team in case of unsafe driving behaviour, especially if the reputation of Formula Student organizers, sponsors and other teams is compromised. The decision to remove a team from the FS East competition must be made unanimously by the FS East rules committee and will be made public on the FS East website.

NOTE: This rule has not been established to annoy you, but to ensure that we experience a safe and accident-free Formula Student season.

## 2.10 [CV ONLY] FUEL TYPE ORDER

The teams must inform FS East of the type of fuel they intend to use.

The fuel type can be chosen after registration at FS East website.

The fuel types provided are expected to be 98 octane (ROZ 98) gasoline and E-85.





## **2.11 [EV ONLY] ELECTRICAL SYSTEM OFFICER(S) DECLARATION**

All EV teams and DV teams with electric traction systems must declare Electrical System Officer(s). Please note the responsibilities of the ESO in A4.8 of the Rules 2023. The ESOs must be nominated by the team captain on login.fseast.eu. The number of ESOs are limited to 5 per team. No Diploma or degree will be required, but a liability statement needs to be received and signed on the event.

## **2.12 [EV ONLY] ACCUMULATOR CONTAINER**

Please see the rules according to: FORMULA STUDENT EAST RULES 2023 – 3.3 SPECIAL REQUIREMENTS AND RESTRICTIONS FOR ELECTRIC VEHICLES

# 3. TECHNICAL RULES

Technical rules are applied from the attending car's respective year. Those rules can be less restrictive if the team can show.

that the car can be safely operated and cannot danger anyone nearby in any means. To ensure safe operation across the board, however, technical rules detailed below extend upon or overrule relevant sections of respective rulebook for the entered vehicle.

## **3.1 TECHNICAL INSPECTION**

The car needs to have a start number in a following format: [A##] ## - can be any double-digit natural number, preferably corresponding the number of the respective university.

### **3.1.1 INSPECTION OF ELECTRONIC THROTTLE CONTROL (ETC)**

Internal combustion engine vehicles equipped with ETC will have two parts of technical inspection: mechanical inspection and electrical inspection.

The electrical inspection is the second part of the inspection, it is held in the engine test area. and will focus on the operation of ETC.

### **3.1.2 INSPECTION OF BSPD CIRCUIT**

All combustion vehicles (where applies) must have a BSPD circuit, see Rules 2023 T11.6

A template circuitry can be found on the FSG website:

[https://www.formulastudent.de/fileadmin/user\\_upload/all/2019/important\\_docs/FSG19\\_BSPD\\_v0.3.zip](https://www.formulastudent.de/fileadmin/user_upload/all/2019/important_docs/FSG19_BSPD_v0.3.zip) The inspection of BSPD circuit is held in the engine test area and will focus on its operation.





### 3.2 SCRUTINEERING PROCEDURE

The following steps need to be passed during the scrutineering, according to classification of the car.

	EV	CV
EV1 Scrutineering	X	
Accumulator Scrutineering	X	
Mechanical Scrutineering	X	X
EV2 Scrutineering	X	
ETC/BSPD Inspection		X
Driver Egress & Safety Test	X	X
Tilt Test	(X)	(X)
Rain Test	(X)	
Brake Test	X	X

#### 3.2.1 STATIC SCRUTINEERING EVENTS

##### 3.2.1.1 PRE-INSPECTION

There will be no Pre-Inspection on FS East 2023.

##### 3.2.1.2 EV 1 SCRUTINEERING [EV ONLY]

Electrical Scrutineering of the Low Voltage systems of the car. The TS accumulator must be outside of the car.

##### 3.2.1.3 ACCUMULATOR SCRUTINEERING [EV ONLY]

Electrical Scrutineering of the TS Accumulator and Charging systems of the car. Can be done independently from EV1.

Teams also have to present all safety equipment and high voltage rated tools.

##### 3.2.1.4 MECHANICAL SCRUTINEERING

Mechanical Scrutineering of the car.

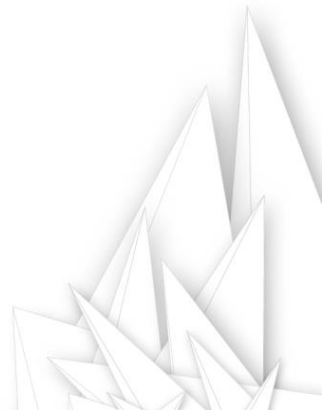
EV only: the Accumulator Scrutineering must be passed and the TS accumulator has to be mounted inside of the car.

##### 3.2.1.5 EV 2 SCRUTINEERING [EV ONLY]

Electrical Scrutineering of the Tractive System of the car. The car must be in ready-to-race condition, and every scrutineering stage mentioned before have to be passed to start the EV2 scrutineering.

##### 3.2.1.6 ETC/BSPD INSPECTION

See Section 3.1





### 3.2.1.7 DRIVER EGRESS & SAFETY TEST

During the Driver Safety Test, each team has to present their safety equipment, and also demonstrate the driver emergency exit situation. Teams must also present every item listed in Rules 2023 T13.

### 3.2.2 EQUIPMENT AT ELECTRIC VEHICLES INSPECTION

For the electrical inspection of the technical inspection each team must present the following equipment:

- TS accumulator charger to be used during the event (EV2)
- all TS accumulator containers to be used during the event (EV2)
- TS Accumulator Container Hand Cart (EV2)
- Tools as listed in Rules 2023 IN3.2.1 and IN4.2.1

### 3.2.3 READY-TO-RACE CONDITION

Before Drivers Safety Test, the car must be in ready-to-race condition. No body part change or additional venting hole covering is allowed after this point.

### 3.2.4 BRAKE TEST

There will be an official brake test for each alumni car. The requirements for passing are less strict than in the official FS Rules. A secure stop needs to be proven to the judging committee.

## 3.3 ALUMNI CUP EXCEPTIONS

Alumni cup members can volunteer as a scrutineer, however, are not allowed to scrutineer their own cars.

The alumni teams can show proof of successful scrutineering in the years before to reduce the scrutineering time.

Furthermore, rain and tilt tests are not necessary because of the same reason.

The one and most important rule of the alumni cup is that the participating car needs to be **SAFE**.

## 3.4 VEHICLE STATUS VIDEO (VSV)

All starting vehicle needs to provide a VSV, which is not restricted to that of the FORMULA STUDENT EAST RULES 2023. But need to show readiness of the car and be made between 2022 September – 2023 July.

The last deadline will be published after the registration process.





## 4. STATIC EVENTS

Attending the FSEast Alumni Cup 2023 means that the members are selected to be able to participate as judges at the FSEast 2023. While the Static events AC-points can be also acquired. The number of points will be defined by the FSEast committee.

The distribution will be published before the event.

## 5. DYNAMIC EVENTS

As defined in the Rules 2023 Part D.

Only those people can enter the Dynamic Area during the Event, who are wearing long trousers (excluding stretch and nylon pants) and closed shoes on their legs, due to safety reasons.

Only 4 team members per team are allowed to enter the Dynamic Area, including the driver.

Team members must wear wristbands to enter the Dynamic Area, wristbands are provided by the organisers.

### 5.1 DRIVER RESTRICTIONS

The driver can be any team member who can take responsibility and have experience with the actual car.

The driver equipment can be changed between team members but only outside of the dynamic area. For every driver a successful driver egress test needs to be made.

### 5.2 SKIDPAD

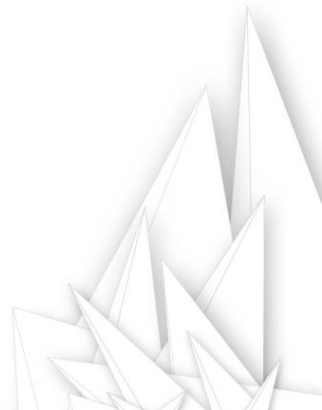
Might be extended with some entertainment enhancing event.  
To Be Determined.

### 5.3 ACCELERATION

Power limitation can be held up if safety measurements allow.

### 5.4 AUTOCROSS

To Be Determined.







## 5.5 ENDURANCE

There will be an adjusted scoring table. Depending on the car's age and performance through the endurance event. More information coming after the registration period.

## 5.6 FULL LAP AT THE HUNGARORING

To Be Determined.

## 5.8 FUEL

FS East offers two types of fuels for teams.

1. Gasoline, RON 100
2. MOL Racing Fuel DRX (ethanol 85%, with 15% RON 102 maingrade gasoline).

Teams should come to the FS East 2023 Event with empty fuel tank.

It is not possible to empty the fuel tank in the FS East Pits.

Measuring the ethanol ratio of the fuel is not allowed at the event site, further details of the provided fuel can be found at [www.fseast.eu](http://www.fseast.eu).

Teams must fill the tank fully at the first time.

In case of the suspension of the endurance, teams are allowed to have the engine heating procedure again.

In this case, the fuel must be fuelled top before the endurance starts again.

## 5.9 TIMEKEEPING

Transponders will be provided by FS East Event.

Transponders must be placed safely (securely attached, protected from debris and hot surfaces) on the left side of the vehicle (preferably on the nose cone, sidebox or diffuser) for timekeeping.

Important: Transceiving surface of the transponder must not be faced to the ground, but point to the left parallelly to the ground and perpendicularly to the centreline of the vehicle.

The transceiving surface must not be obscured by any parts of the vehicle.

Image of a possible solution will be shown in the Event Handbook.

## 5.10 FLAG USAGE IN CASE OF BURNING CARS

In case of track marshals notice major failure with the vehicle, yellow flags and STOP tables will be shown by the organisers.

Drivers must stop the vehicle at the side of the track in a safe place.



## 6. RECREATIONAL EVENTS

Recreational events can take place outside of the track and count towards the overall collectable points.

These events are meant to enhance team spirit and integration.

Detailed information about those events will be available at arrival.



We reserve the right to change and will be published on the FSEast official website. ([www.fseast.eu](http://www.fseast.eu))