

# FSS

FORMULA STUDENT *SPAIN*

HANDBOOK  
**HNBK**  
FSS 2021

11<sup>TH</sup> EDITION



This HANDBOOK RELEASE (RELEASE\_02) is the SECOND VERSION. FSS organization will not distribute this document as a printed document at the Ticket Centre, at the moment of Team Registration on Wednesday, 4th, August 2021. Any additional changes will be updated in following releases.



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# 00. FORMULA STUDENT SPAIN

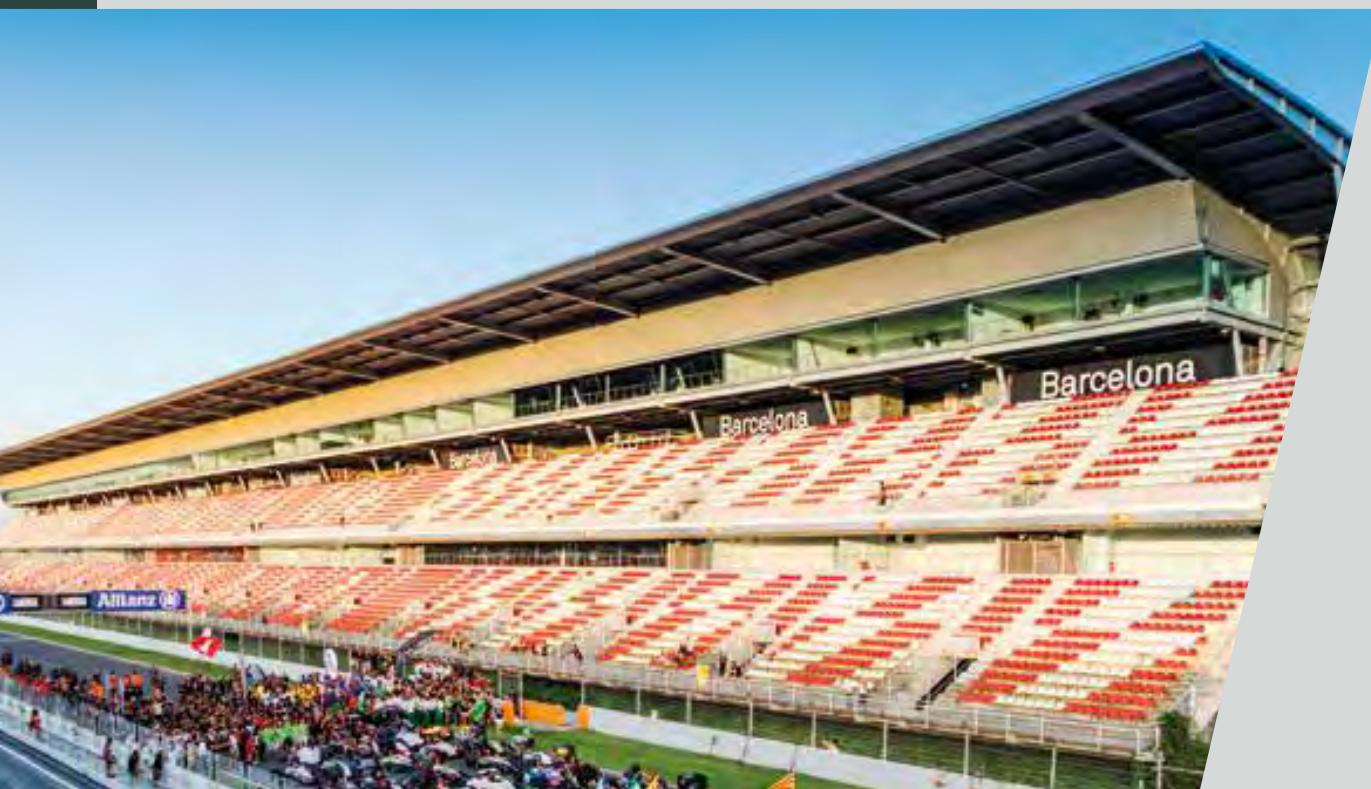
Formula Student Spain is a competition, organized by STA (Spanish Society of Automotive Engineers), with the support of Spanish institutions and relevant companies in the automotive industry. All of them work in a nonprofit way for the event. FSS organization is a pool of more than 250 volunteers, mostly from motor sport & automotive sectors that work in a nonprofit way for the event, as Judges, Scrutineers, Marshalls, Officials, Staff, etc. Also, more than 50 young students in their last years of engineering degree support the event.

## OUR MISSION

FSS has the mission to create a multicultural space for young engineers for the exchange and development of knowledge and values of respect, people care, teamwork and effort, to reach the highest levels of technical and personal excellence, in both participants and staff.

## OUR VALUES

Passion for motorsports.  
Interest in people's care.  
Innovation and Creativity.  
Respect, teamwork and effort.



# 01. EMERGENCY INFORMATION

Here you will find information to help you if you have an emergency during the event.

## IF IT IS A MINOR INJURY:

For a minor injury emergency, you can contact any FSS volunteer, as they can provide first aid materials. If you think you need a major intervention, you can contact Event Control at any time. In addition, here you have information about the closest Medical Centers to Circuit de Barcelona-Catalunya.

### MEDICAL CENTER

#### MONTMELÓ

Plaça Ernest Lluch, 1  
+34 93 544 44 40

### MEDICAL CENTER

#### MONTORNÈS DEL VALLÉS

C/ de Can Parera, 7  
+34 93 572 03 03

### MEDICAL CENTER

#### GRANOLLERS

C/Museu, 19  
+34 93 860 05 10

## IF IT IS A SEVERE INJURY:

Contact the Event Control or any one from the Organization that will contact emergency services. In case the Event Control is closed, you can contact the emergency number:

**+34661801384**

Also, here you have the details about the nearest hospital to Circuit de Barcelona-Catalunya.

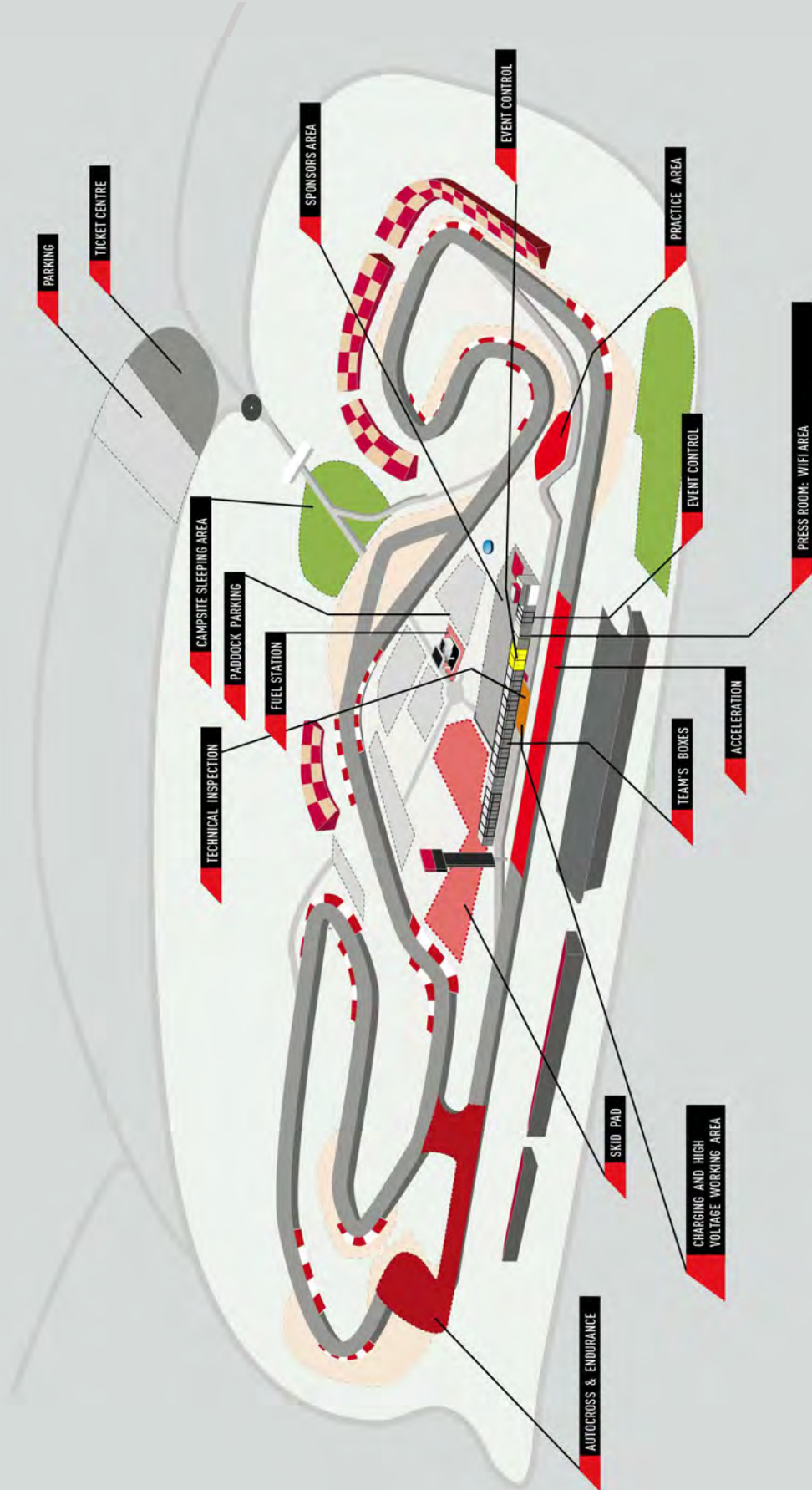
## THE EMERGENCY NUMBER IS:

# 112

### HOSPITAL GENERAL DE GRANOLLERS

Av. de Francesc Ribas  
+34 93 842 50 00

# 02. SITE PLAN



# 03. SCHEDULE

## WEDNESDAY, 4TH

09:00H - 17:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 22:00H:  
 16:00H - 19:00H:  
 16:00H - 19:00H:  
 21:00H - 22:00H

Registration  
 Event Control  
 Pits Open/Close  
 Drivers and ESO Registration  
 Pre-Scrutineering  
 Team Leaders Briefing

Ticket Centre  
 Box 8  
 Pits  
 Box 8  
 Pits  
 Press Room

## THURSDAY, 5TH

07:30H - 08:30H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 08:00H - 22:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 14:00H & 15:00H - 19:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 19:00H:  
 15:00H - 20:00H:

Team Briefing  
 Event Control  
 Pits Open/Close  
 Charging & High Voltage Area  
 Engine Test Area  
 Fuel Station  
 Welding Area  
 Scrutineering  
 Practice Area

Press Room  
 Box 8  
 Pits  
 Box 19 to 22  
 Parking IN Torre  
 Circuit Fuel Station  
 Paddock FSS  
 Box 9 to 18  
 Official Track

## FRIDAY, 6TH

07:30H - 08:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 08:00H - 1:00H:  
 09:00H - 14:00H & 15:00H - 00:00H:  
 09:00H - 14:00H & 15:00H - 00:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 19:00H:  
 08:30H - 11:00H:  
 12:30H - 15:00H:  
 16:30H - 19:00H:  
 21:00H - 00:30H:

Team Briefing  
 Event Control  
 Pits Open/Close  
 Charging & High Voltage Area  
 Engine Test Area  
 Fuel Station  
 Practice Area  
 Welding Area  
 Scrutineering  
 SkidPad - Driverless  
 Acceleration - Driverless  
 AutoX - Driverless  
 Acceleration

Press Room  
 Box 8  
 Pits  
 Box 19 to 22  
 Parking IN Torre  
 Circuit Fuel Station  
 Official Track  
 Paddock FSS  
 Box 9 to 18  
 Parking IN2  
 Official Track  
 Official Track  
 Official Track

## SATURDAY, 7TH

07:00H - 07:30H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 07:30H - 22:00H:  
 09:00H - 14:00H & 15:00H - 19:00H:  
 09:00H - 14:00H & 15:00H - 19:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 08:00H - 14:00H & 15:00H - 20:00H:  
 09:00H - 14:00H & 15:00H - 20:00H:  
 08:00H - 11:30H:  
 16:00H - 19:30H:  
 12:00H - 12:30H:  
 12:30H - 15:30H:

Team Briefing  
 Event Control  
 Pits Open/Close  
 Charging & High Voltage Area  
 Engine Test Area  
 Fuel Station  
 Practice Area  
 Welding Area  
 SkidPad  
 Trackdrive - Driverless  
 Coursewalk AutoX  
 AutoX

Press Room  
 Box 8  
 Pits  
 Box 19 to 22  
 Parking IN Torre  
 Circuit Fuel Station  
 Official Track  
 Paddock FSS  
 Parking IN2  
 Official Track  
 Official Track  
 Official Track

## SUNDAY, 8TH

07:00H - 07:30H:  
 08:00H - 14:00H & 15:00H - 20:00H:  
 07:30H - 22:00H:  
 07:30H - 14:00H & 15:00H - 19:00H:  
 07:30H - 14:00H & 15:00H - 18:00H:  
 08:30H - 14:00H & 15:00H - 18:00H:  
 07:30H - 14:00H & 15:00H - 18:00H:  
 07:30H - 14:00H & 15:00H - 18:00H:  
 08:00H - 8:30H:  
 08:30H - 13:00H & 14:00H - 15:00H:  
 18:00H - 19:00H:  
 20:00H - 21:00H:

Team Briefing  
 Event Control  
 Pits Open/Close  
 Charging & High Voltage Area  
 Engine Test Area  
 Fuel Station  
 Practice Area  
 Welding Area  
 Coursewalk Endurance  
 Endurance  
 Team Photo  
 Awards Ceremony

Press Room  
 Box 8  
 Pits  
 Box 19 to 22  
 Parking IN Torre  
 Circuit Fuel Station  
 Official Track  
 Paddock FSS  
 Official Track  
 Official Track  
 Official Track  
 Main Tribune



# 04. EVENT INFORMATION

## 04.1. TICKET CENTRE

LOCATION	Main Entrance
SCHEDULE	See schedule on pages 15 and 16

### SERVICES

- Antigen Tests
- Team Registration (Event & Campsite).
- Vehicle Passes.
- Deposits for dynamic vests, media vest, transponder and energymeter, should be paid through the following link **before the event**:  
<https://www.stauto.org/formula-student-spain-2021-dynamic-media-vests-energy-meter-transponder/>



We strongly recommend you pay the campsite fee in advance through the link:  
<https://www.stauto.org/formula-student-spain-2021-campsite-payment/>





## 05. COVID GUIDELINES

Mask wearing is compulsory in both indoors and outdoors of the Circuit.

The team members will be allowed to remove their mask only eating and drinking, inside the designated areas for that purpose. The volunteers will assure that the team members follow the COVID-19 restrictions. If a team or team member is risking the health and safety of other team members and/or volunteers, the entire team can be severely penalized or disqualified.

Hydroalcoholic gel will be distributed through all the areas of the event.

### COVID-19 BUBBLES

The teams will be divided in 4 different bubbles (DV, CV, EV1 and EV2). Each bubble will be identified by a colour, and each team member will receive a specific and identifying wristband.

Each bubble will have a designated pit area and designated WC inside the pit area. Each bubble will also have a designated smoking area far away from the pit area.

The campsite area is also divided by bubbles. Each bubble has a specific campsite area, and inside the area there are toilets, showers, and specific water tanks for each area.

The teams are not allowed to visit areas of different bubbles. If a team needs support from other teams located in different bubbles, the volunteers will work as a link between both bubbles.

### INCOMING AND OUTCOMINGS OF THE CIRCUIT

The teams cannot go outside the circuit unless it is for urgent and justified matters. If a team needs to go out of the Circuit, it must be authorized by the organization.

### PIT AREAS

The pit doors must be always open.

The pit has two areas. The Paddock side, and the pit lane side (track side). The team which occupies the paddock side, will only be allowed to exit/enter the pit through the paddock door. The team which occupies the track side will only be allowed to exit/enter the pit through the pit lane (track) door.

There will be pit boxes for the teams to cross from the paddock area to the pit lane area and back.

The organization will indicate the proper area in front of the pit to eat the meals ensuring the 2m distance.

## 05.1. COVID BUBBLES

### Pink bubble:

Aeroless FST Lisboa	D450	DV-EV	Portugal
AGH Racing Driverless BCN	D470	DV-EV	Poland
eMotorsport	D454	DV-EV	Spain
eForce Driverless	D467	DV-EV	Czech Republic
Global Formula Racing	D420	DV-EV	United States
University Racing Eindhoven	D440	DV-EV	The Netherlands
UPC ecoRacing	D412	DV-EV	Spain
BCN eMotorsport	E54	EV	Spain
eForce FEE Prague Formula	E066	EV	Czech Republic
FST Lisboa	E50	EV	Portugal
Global Formula Racing	E32	EV	Germany
AGH Racing	210	CV	Poland

### Orange bubble:

ISC Formula Student Electric	E17	EV	Spain
Mainfranken-Racing	E97	EV	Germany
Running Snail	E023	EV	Germany
Squadra Corse PoliTo	E146	EV	Italy
Superior Engineering	E69	EV	Slovenia
T.U.C. Racing e.V.	E36	EV	Germany
Tecnum eRacing	E56	EV	Spain
Uniovi eTech Racing	E28	EV	Spain

### Yellow bubble:


ARUSe	E5	EV	Spain
BlueFlash HAWK	E16	EV	Germany
BRS Motorsport Chalmers	E45	EV	Germany
Formula Student	E46	EV	Sweden
Dynamicse. V.	E62	EV	Germany
Formula Student Bizkaia	E48	EV	Spain
HorsePower Hannover e.V.	E20	EV	Germany
ARUSc	218	CV	Spain

### Blue bubble:

Bluestreamline	111	CV	Romania
Dynamics UPC Manresa	225	CV	Spain
EUSS Motorsport	289	CV	Spain
FaSTDa Racing	242	CV	Germany
Formyla Gades	212	CV	Spain
Formula UC3M // MAD TEAM	373	CV	Spain
FSUPV Team	295	CV	Spain
HHN Racing e.V.	239	CV	Germany
MART	364	CV	Spain
MoRe Modena Racing	237	CV	Italy
STV-Scuderia Tor Vergata	227	CV	Italy
U Motorsport	296	CV	Spain
UniBo Motorsport	288	CV	Italy
UVigo Motorsport Vilanova	314	CV	Spain
Formula Team	280	CV	Spain

# 06. PARTICIPATING TEAMS

## 06.1 COMBUSTION

	TEAM	UNIVERSITY	CAR
	AGH Racing	AGH Univeristy of Science and Technology	210
	ARUSc	Universidad de Sevilla	218
	BlueStreamline	Transilvania University of Brasov	111
	Dynamics UPC Manresa	UPC Manresa - EPSEM	225
	EUSS Motorsport	Escola Universitària Salesiana de Sarrià	289
	FaSTDA RAcing	UAS Darmstadt	242
	Formula Gades	University of Cádiz	212
	Formula UC3M // MAD TEAM	Universidad Carlos III de Madrid	373
	FSUPV Team	Universitat Politècnica de València (UPV)	295
	HHN Racing e.V.	University of Applied Sciences Heilbronn	239
	MART	University of Malaga	364
	MoRe Modena Racing	Università degli Studi di Modena e Reggio Emilia	237
	STV - Scuderia Tor Vergata	Università degli Studi di Roma Tor Vergata	227
	U Motorsport	Universidad Rey Juan Carlos	296
	UniBo Motorsport	Università di Bologna	288
	UVigo Motorsport	Universidad de Vigo	314
	Vilanova Formula Team	UPC Vilanova	280



# 06. PARTICIPATING TEAMS

## 06.3 ELECTRIC COMPETITION

	TEAM	UNIVERSITY	CAR
	ARUSE	Universidad de Sevilla	E51
	BCN eMotorsport	(ETSEIB) Universitat Politècnica de Catalunya	E54
	BlueFlash HAWK	HAWK - HHG	E161
	BRS Motorsport	UAS Bonn Rhein Sieg	E45
	Chalmers Formula Student	Chalmers University of Technology	E46
	Dynamics e.V.	OTH Regensburg	E62
	eForce FEE Prague Formula	CTU in Prague	E066
	Formula Student Bizkaia	University of the Basque Country UPV/EHU	E48
	FST Lisboa	U Lisbon – Instituto Superior Técnico	E50
	Global Formula Racing	DHBW Ravensburg	E32
	Horse Power Hannover e. V.	Leibniz Universität Hannover	E20
	ISC Formula Student Electric	Universidad Pontificia Comillas ICAI - ICADE	E17
	Mainfranken-Racing	UAS Schweinfurt	E97
	Running Snail	Ostbayerische Technische Hochschule Amberg-Weiden	E023
	Squadra Corse PoliTo	Politecnico di Torino	E146
	Superior Engineering	University of Ljubljana	E69
	T.U.C. Racing e.V.	TU Chemnitz	E36
	Tecnun eRacing	University of Navarra	E56
	Uniovi eTech Racing	University of Oviedo	E28

## 06.3 DRIVERLESS COMPETITION (ELECTRIC)

	Aeroless FST Lisboa	University of Lisbon - Instituto Superior Técnico	D450
	AGH Racing Driverless	AGH Univeristy of Science and Technology	D470
	BCN eMotorsport	(ETSEIB) Universitat Politècnica de Catalunya	D454
	eForce Driverless	Czech Technical University	D467
	Global Formula Racing	Oregon State University	D420
	University Racing Eindhoven	Eindhoven University of Technology	D440
	UPC ecoRacing	(ESEIAAT) Universitat Politècnica de Catalunya	D412

# 07. REGISTRATION & ACCESS TO THE CIRCUIT

LOCATION	Main Entrance
SCHEDULE	Wednesday, August 4th, 2021/ 09.00h - 1700h

The Registration procedure for:

- Team members
- Vehicles (paddock, campsite and loading&unloading passes)
- Campsite

If the registration process has not been completed successfully, team members will not have access to the Circuit de Barcelona -Catalunya, neither the assigned pit nor the campsite area.

## 07.1. TEAM REGISTRATION

There are time slots for the registration, see page number (07.5). Upon arrival, a FSS staff member will show you where to park your vehicles and will tell you who must go to the COVID19 testing module.

Once you have all your documents and the negative test result, the team leader will be allowed to go to the TICKET CENTRE module and register the team.

The team will not be registered if there is a document left or if one the test result is positive.

Team leader will present the previously uploaded and approved documents (Covid certificate, and the FINAL TEAM MEMBER DESIGNATION) in hard copy, signed by all the team members that will attend the competition.

Team leader will show all the identity cards and the staff volunteer will ensure that the identity cards match with the team members.

At the end of the registration procedure, team leaders will receive all necessary badges, wristbands, vests, vehicle passes and documents to go into the venue and compete at FSS2021, except for the transponder and energy meter, that will be delivered at the Event Control.

## 07.2. DRIVERS REGISTRATION

Driver registration will be at the event control, on Wednesday, August 4th, 2021, from 16.00h to 19.00h Teams can register no more than 4 drivers.

All drivers will receive wristbands that recognise them as drivers after the verification of the following documents:

- Valid Driver License
- Student ID

Accredited Drivers will receive an RFID wristband.

## 07.3. ELECTRICAL SYSTEM OFFICER

Each electric team must register, at least, one electrical system officer (ESO) at the event control, on Wednesday, August 4th, 2021, from 16.00h to 19.00h.

We will accept a maximum of 4 ESOs.

FSS only accepts ESOs with previous validation of the submitted document uploaded on the intranet or by e-mail. Accredited ESOs will receive a specific wristband.

## 07.4. PARKING & VEHICLE ENTRANCE PASS

At the time of the team registration, each team will receive 3 vehicle passes:

- 1) 1 parking slot in the paddock area and campsite, if the team is going to camp
- 2) 1 parking access for the parking area
- 3) 1 Entrance pass for loading/unloading the registration day and the last event day.

All teams must display the pass behind the windscreen, and fill it out with the following information:

- License plate number.
- Team Name.
- Driver's Name.
- Driver's cell phone





## 07.5. REGISTRATION TIME SLOTS

TEAM	CAR	COUNTRY	REGISTRATION TIME SLOT
Aeroless FST Lisboa	D450	Portugal	09:00:00
AGH Racing	210	Poland	09:00:00
AGH Racing Driverless	D470	Polnad	09:00:00
BCN eMotorsport	D454	Spain	09:00:00
BCN eMotorsport	E54	Spain	09:00:00
FST Lisboa	E50	Portugal	09:00:00
Global Formula Racing	D420	United States	09:30:00
Global Formula Racing	E32	Germany	09:30:00
eForce Driverless	D467	Czech Republic	10:00:00
eForce FEE Prague Formula	E066	Czech Republic	10:00:00
University Racing Eindhoven	D440	The Netherlands	10:00:00
ARUSc	218	Spain	10:30:00
ARUSE	E51	Spain	10:30:00
BlueFlash HAWK	E161	Germany	10:30:00
BRS Motorsport	E45	Germany	10:30:00
UPC ecoRacing	D412	Spain	10:30:00
UPC ecoRacing	E46	Sweden	11:30:00
Chalmers Formula Student	E62	Germany	11:30:00
Dynamics e.V.	E48	Spain	11:30:00
Formula Student Bizkaia	E20	Germany	12:00:00
HorsePower Hannover e.V.	E17	Spain	12:00:00
ISC Formula Student Electric	E97	Germany	12:00:00
Mainfranken-Racing	E023	Germany	12:00:00
Running Snail	E146	Italy	12:30:00
Squadra Corse PoliTo	E69	Slovenia	12:30:00
Superior Engineering	E36	Germany	12:30:00
T.U.C. Racing e.V.	E56	Spain	12:30:00
Tecnun eRacing	E28	Spain	12:30:00
Uniovi eTech Racing	111	Romania	13:00:00
BlueStreamline	225	Spain	13:00:00
Dynamics UPC Manresa	289	Spain	13:00:00
EUSS MotorSport	242	Germany	13:00:00
FaSTDa Racing	212	Spain	13:00:00
Formula Gades	373	Spain	15:00:00
Formula UC3M // MAD TEAM	295	Spain	15:00:00
FSUPV Team	239	Germany	15:00:00
HHN Racing e.V.	364	Spain	15:00:00
MART	237	Italy	15:00:00
MoRe Modena Racing	314	Spain	15:00:00
UVigo Motorsport	227	Italy	15:30:00
STV - Scuderia Tor Vergata	296	Spain	15:30:00
Ü Motorsport	288	Italy	15:30:00
UniBo Motorsport	280	Spain	16:00:00
Vilanova Formula Team			

## 07.6. PITS DISTRIBUTION

Pit Number	Team	Car Number	Vehicle Type	Country
24	Aeroless FST Lisboa	D450	DV-EV	Portugal
24	AGH Racing Driverless	D470	DV-EV	Poland
25	BCN eMotorsport	D454	DV-EV	Spain
25	eForce Driverless	D467	DV-EV	Czech Republic
26	Global Formula Racing	D420	DV-EV	United States
26	University Racing Eindhoven	D440	DV-EV	The Netherlands
27	UPC ecoRacing	D412	DV-EV	Spain
27	BCN eMotorsport	E54	EV	Spain
28	eForce FEE Prague Formula	E066	EV	Czech Republic
28	FST Lisboa	E50	EV	Portugal
29	Global Formula Racing	E32	EV	Germany
29	AGH Racing	210	CV	Poland
31	ARUSe	E51	EV	Spain
31	BlueFlash HAWK	E161	EV	Germany
32	BRS Motorsport	E45	EV	Germany
32	Chalmers Formula Student	E46	EV	Sweden
33	Dynamics e.V.	E62	EV	Germany
33	Formula Student Bizkaia	E48	EV	Spain
34	HorsePower Hannover e.V.	E20	EV	Germany
34	ARUSc	218	CV	Spain
36	ISC Formula Student Electric	E17	EV	Spain
36	Mainfranken-Racing	E97	EV	Germany
37	Running Snail	E023	EV	Germany
37	Squadra Corse PoliTo	E146	EV	Italy
38	Superior Engineering	E69	EV	Slovenia
38	T.U.C. Racing e.V.	E36	EV	Germany
39	Tecnun eRacing	E56	EV	Spain
39	Uniovi eTech Racing	E28	EV	Spain
41	BlueStreamline	111	CV	Romania
41	Dynamics UPC Manresa	225	CV	Spain
42	EUSS MotorSport	289	CV	Spain
42	FaSTDa Racing	242	CV	Germany
43	Formula Gades	212	CV	Spain
43	Formula UC3M // MAD TEAM	373	CV	Spain
44	FSUPV Team	295	CV	Spain
44	HHN Racing e.V.	239	CV	Germany
45	MART	364	CV	Spain
45	MoRe Modena Racing	237	CV	Italy
46	STV - Scuderia Tor Vergata	227	CV	Italy
46	Ü Motorsport	296	CV	Spain
47	UniBo Motorsport	288	CV	Italy
47	UVigo Motorsport	314	CV	Spain
48	Vilanova Formula Team	280	CV	Spain
48				

## 08. GENERAL GUIDELINES

### 08.1. ANNOUNCEMENTS

The event shall be governed by the general guidelines and the schedule provided in the handbook.

General procedures will be announced at the team Briefings.

Specific rules and event updates for each day will be announced during the Driver Briefings. It is mandatory to attend daily briefing by all team captains and drivers for that day (see rules document).

Listen to the announcements and check the Event Control for changes in the schedule.

### 08.2. SURVEILLANCE

Each team is responsible for the security of its car and the equipment in its pits. Do not leave any visible valuables in your pit at any time, security cannot supervise everything at all times.

### 08.3. FIRES AND SMOKING

#### FORBIDDEN

No open fires are allowed in the PIT AREA & ENGINE TEST AREA. This includes BBQ grilles, oxy-acetylene torches, heaters, cigarettes, etc.

Smoking is strictly prohibited in the DYNAMIC AREA, all BUILDINGS, and the PIT AREA.

Each bubble will have an assigned smoking area.

### 08.4. FIRE EXTINGUISHERS

Your fire extinguishers must be accessible at any time. All team members must be familiar with their use. At least one fire extinguisher must accompany the car wherever it goes.

### 08.5. ALCOHOLIC DRINKS

#### FORBIDDEN

Alcoholic drinks are completely forbidden inside the competition and campsite areas.

If a team does not respect this rule, they can be PENALIZED.

### 08.6. ENERGY METERS

The energy meter will be provided at the event control from Thursday 5th, August 2021. The five first teams on the scrutineering order list will receive the energy meters at the event control on Thursday 5th, August 2021 at 21.30h.

All electric teams must pay 50 € deposit for the energy meter by the methods stated in Formula Student Spain Rules. The receipt needs to be given to the Event Control or Charging Area Responsible; then the energy meter and needed connectors will be handed out. The proper functioning of the energy meter will be evaluated by the energy meter responsible after the team has passed the E-scrutineering.

**IMPORTANT:** Energy meter should be dismantled from the car and returned to the energy meter responsible before the awards ceremony.



## 08.7. TRANSPONDERS

The transponder needs to be installed prior to the dynamic events. The transponder will be supplied at the event control on Thursday 5th August 2021 after 12h.

All teams must pay 50 € deposit for the TRANSPONDER by the methods stated in Formula Student Spain Rules Version 4.0. The receipt needs to be given to the Event Control; then TRANSPONDER and support will be handed out.

**IMPORTANT: TRANSPONDER must be dismounted from the car and returned to the EVENT CONTROL before the awards ceremony.**

## 08.8 CAMPSITE GENERAL GUIDELINES

Alcohol is forbidden in the campsite area.

The campsite illumination will be shut down at 23h. Anyone remaining in the social area after these hours will be penalised.

Cleaning services are planned daily.

Each bubble will have a designated Campsite Area. The teams are not allowed to go to other bubble's campsite area.

No pools are allowed in the campsite due to COVID-19 pandemic.

Any team member not following these guidelines could be penalized.

Penalties:

1st warning: No points will be removed from the team.

2nd warning: Team will get minus 25 points.

3rd warning: Team will be excluded from the FSS competition.

## 08.9. FORMULA STUDENT SPAIN 2021 RULES

Formula Student Spain has its own rules that supersedes FSG and FSAE rules. The FSS rules are located here: <http://www.formulastudent.es/>

Beside the Formula Student Spain rules, FSS will comply with the FSG 2021 and FSAE 2021 rules.

Whenever applicable, Formula Student Germany 2021 rules take precedence over the FSAE 2021 general rules.

# 09. TECHNICAL INSPECTION

**LOCATION**      Boxes 9 to 18

**SCHEDULE**      To be confirmed

## ELECTRIC CARS

Electric cars must pass six different inspections / tests before being allowed to go to the Practice Area and compete on Dynamic Event.

- Pre- inspection
- PWT Inspection
- Scrutineering
- Tilt Table
- Rain Test
- Brakes Test

## ELECTRIC DRIVERLESS CARS

Electric Driverless cars must pass eight different inspections / tests before being allowed to go to the Practice Area.

- PWT Inspection
- Pre- inspection Scrutineering
- Driverless Inspection Tilt Test
- Rain Test
- Brake Test
- Emergency Brake System Test

## COMBUSTION CARS

Combustion Cars must pass five different inspection / tests before being allowed to go to the Practice Area and compete on Dynamic Events.

- Pre-inspection
- Scrutineering.
- Tilt Test
- Noise Test
- Brake Test

## COMBUSTION DRIVERLESS CARS

Combustion Driverless cars must pass seven different inspections / tests before being allowed to go to the Practice Area.

- Pre-inspection Scrutineering
- Driverless Inspection
- Tilt Test
- Rain Test
- Brake Test
- Emergency Brake System Test

## PRE-INSPECTION

Pre-inspection will be conducted in the pit, where the technical inspectors will visit the teams according to the scrutineering order, except for the first 12 electrics cars and the 6 first combustion cars, which will be done after mechanical scrutineering.

A team that is not present or ready at the first visit must contact the technical inspectors in the pit for a new appointment.

Pre-inspection must be completed latest before the tilt test.

The driver egress is mandatory for all drivers. Before participating in a dynamic event, the driver must have passed the egress test.

The following items must be presented for pre-inspection:

- All helmets
- All driver's equipment and other safety gear
- Two sets of four tires mounted on rims for dry and wet driving conditions
- Two unused and in date fire extinguishers

### Inspection Responsible Person

To accelerate the technical inspection process (for E and M scrutineering) and accumulator check, the team must appoint one team member (for the E-teams this must be one of the registered ESOs), who will be responsible for the technical inspection. This team member should be familiar with the car and all the inspection points of the technical inspection sheet. He must be able to show the scrutineers the compliance of the car with respect to all the inspection points. This team member will also assure that the car is ready for inspection. This includes that all documents, test samples and tools needed for scrutineering are available at the inspection.

During inspection may this team member may have to perform the technical inspection autonomously, observed by the scrutineers.

He should be able to answer all their questions regarding the scrutineering. If this team member is not able to perform any of these requirements or the car is not ready, the technical inspection will be stopped, and the team will have to go back to the box. A re-try for scrutineering can be done via re- scrutineering.

Only when a car has successfully passed all the different inspections and the corresponding stickers are on the bodywork it can compete in the dynamic events and to practice at the test track.

The attachment of any on board camera must be checked during the technical inspection and marked.

There will be two waiting queues for scrutineering (electrics & combustion) will start at street behind the scrutineering area, so any team member can guide the car up to the queue. If you do not finish the scrutineering for any reason you have to leave the scrutineering area and fix all problems. FSS has the right to reorder the scrutineering queue in case the scrutineering slot of a team coincides with a time slot of the team for a static event.

Let us remember that if the scrutineers feel that the car is NOT in "in ready-to-race condition" the inspection process will be stopped, and the team must leave (RuleN1.3.6.).

## 09.1. PRE-INSPECTION & SCRUTINEERING

Only four team members maximum in the inspection box. For electric cars one of these four team members must be the Electrical System Officer.

To get all the teams through scrutineering as fast as possible, there will be up to 4 teams of scrutineers for electric cars and 4 teams of scrutineers for the combustion cars.

### ELECTRIC CARS: YOU MUST BRING

- Copies of ESF and FMEA.
- Copies of any Structural Equivalency Spreadsheet and any Impact Attenuator Data Form.
- A test piece from the impact attenuator.
- For monocoque frames, laminated test samples as documented on the SES.
- The tallest driver of the team must be in attendance for roll bar height.
- Quick Jack + Push bar.
- Tools
- Milohmeter
- Energy Meter.
- All accumulator containers to be used during the event.
- Accumulator Container Hand Cart.
- Charger.
- Tools needed for (dis-)assembly of Accumulator Container.
- PDF or print-out of rule questions, if necessary.
- Pictures of accumulator internals, if necessary.
- Datasheets for used wiring, insulation materials, tractive system components and container material with needed values highlighted.
- Samples of all wire types used inside the accumulator container.
- Samples of all used accumulator container material.
- GLVS battery or cell datasheet.
- For self-developed GLVS battery packs: an opened battery pack.
- Datasheets for used wiring, insulation materials, and TS components.
- Samples of all wire types used for the tractive system.
- Fully assembled spare boards of all inaccessible TS boards.
- Photographs of all inaccessible TS connections.
- Laptop and cables to display data of the AMS.

### ADDITIONALLY, FOR DRIVERLESS

- ASF hardcopy
- RES remote control
- Sourcecode of EBS supervisor, either digital or hardcopy

### COMBUSTION CARS: YOU MUST BRING

- Copies of any Structural Equivalency Spreadsheet and any Impact Attenuator data form.
- A test piece from the crashed impact attenuator.
- For monocoque frames, laminated test samples as documented on the SES.
- The tallest driver of the team must be in attendance for roll bar height and egress checks.
- Quick Jack + Push bar.
- Tools.

## 09.2. TILT TABLE TESTING

Combustion cars must fill their tanks to the full mark prior to tilt table testing.

The vehicle should be oriented on the tilt table in the direction that is most likely to create spillage. The table will then be tilted to an angle of 45 degrees. There must be no fluid leakage at this angle.

If the vehicle passes this spillage test, the angle is increased to 60 degrees. If the upper wheels remain on the table, the vehicle passes.

The station manager(s) should be consulted if this occurs. The person in charge at the tilt table must sign an inspection form, which travels with the car. A sticker is applied on the car, to indicate it passed the tilt table test.

### SAFETY GUIDELINES

- Four team members maximum in the Tilt Table Area. Tallest driver in the car.
- Switch off all engines and master switch off, push car on and off table.
- Attach a strap to rollover hoop and side of table which is to be elevated.
- Inside wheels to be placed against the guard of the tilt table.
- Use absorbent material to soak up leaks.
- Keep a fire extinguisher at hand.

### YOU MUST PASS BEFORE

- Scrutineering including pre-inspection

## 09.3. RAIN TESTING ( ONLY FOR ELECTRIC VEHICLES )

### SAFETY GUIDELINES

- Powered wheels off the ground.
- No driver on board.
- TSAL ON.

### YOU MUST PASS BEFORE

- Scrutineering.
- Tilting Table Test



## 09.4. NOISE TEST

### COMBUSTION VEHICLES

Teams must bring a laptop to monitor for reaching a constant engine speed more precisely and to show the engine rpm monitored from the ecu on the laptop. Sound level must not exceed 110dB(C) during running the calculated engine rpm and not exceed 103 dB(C) at idle.

If the vehicle is unable to pass in three attempts, the car must be repaired and then brought back for retest. The vehicle will not be allowed to compete without passing this test.

### YOU MUST PASS BEFORE

Scrutineering.

Tilting Table Test



## 09.5. BRAKE TESTING

For FSC, each driver will be instructed as to the proper procedure for the brake test. With the car at the start line of the station a green flag (or similar signal) will be used to indicate the start of each run. The driver must accelerate (typically getting into 2nd gear) until reaching the braking area; once inside this area, the driver must apply the brakes with enough force to demonstrate full lock-up of all four wheels. If the vehicle is unable to pass the test in three attempts, the car must be repaired and then brought back for re-testing.

For FSE, each driver will be instructed as to the proper procedure for the brake test. With the car at the start line of the station a green flag (or similar signal) will be used to indicate the start of each run. The driver must accelerate on a short straight until reaching the braking area. Before entering in this braking area, the tractive system must be switched off by the driver and the brake pedal must be actuated as far as possible. The brake test is successful if all four wheels lock.

Note: It may take up to 5 seconds until the Tractive System Active Light goes off after shutting down the tractive system. If the vehicle is unable to pass the test in three attempts, the car must be repaired and then brought back for re-testing.

Please note that re-certification may be required if work is performed on the vehicles' brake system or if the vehicle is involved in an incident which results in vehicle damage.

For Driverless cars, a specific briefing will be held to perform these tests.

## YOU MUST PASS BEFORE

- Scrutineering.
- Tilt Table Test.
- Rain test ( Electric only).
- Noise Test (combustion car only).



# 10. STATIC EVENTS

## 10.1. BUSINESS PLAN EVENT

LOCATION	Online
SCHEDULE	Already provided and updated to all the teams by email

### There will be no Business Plan Finals:

Unfortunately, we will not host Business Plan Finals this year due to the additional constraints imposed by the COVID-19 Pandemic.

During the business plan presentation event, competitors may present their project to an imaginary group of investors or high executives from a big company. The presentation should include all the aspects for the feasibility of the project: such as marketing, manufacturing, logistics, design. The technical aspects of the vehicle should be also included in the presentation but just to reinforce the whole project, not as the main issue. Competitors should promote the idea of the marketplace and the targeted customer. Furthermore, they should show how their design fits into its expected market and how it is completed to a business model. Competitors must convince the judges that their prototype and the related concept represent a profitable enterprise for the manufacturer/investor.

At the end, you need to define the business model and convince to the tentative investors (Business Angels) that your business is profitable.

The business plan presentation event is divided in three parts: Executive Summary, Deep Dive Topic and Presentation.

The business plan presentation will include the main financial statements like Capex plan, R&D Investments, Profit and Loss, Balance Sheet and Cash Flow projections.

### EXECUTIVE SUMMARY

It should be an executive summary of the project and may content the relevant information to be presented during the presentation event. This summary must not exceed one page. The executive summary should contain a brief description of the team's business plan, the two most outstanding technical features of the car, and the production costs of prototype and series.

### DEEP DIVE TOPIC

Judges after receiving the Executive Summary, will ask competitors to provide the specific deep dive topic.

The task will be sent via email. Every team must present this special Deep Dive Topic as a part of the team's business plan presentation to the judges.

- What do you do in your company if the market decreases 20%? What kind of countermeasures you would develop to compensate this situation?

### PRESENTATION

The Business Plan event will be performed online over a virtual conference.

During the presentation, each team will get the opportunity to present their project to the judges. Judges are divided into groups of 2 or 3. Judge groups will change during the day. At the end of each presentation, judges will ask some questions to each team.

### SCHEDULE OF BUSINESS EVENT

30 min Total time, with the following breakdown:

30 min Total time, with the following breakdown:

5 min General and team introduction

10 min Business Model presentation; Financial statements and feasibility explanation; Deep Dive Topic

5 min Q&A

Each team is allowed up to 3 individual logins.

Please enter your session link 10 min before the scheduled time so that the moderator can accept you into the session and resolve any last-minute issues. The 30 min time will only count from the start of your presentation.



## 10.2. ENGINEERING DESIGN EVENT

LOCATION	Online
SCHEDULE	Already provided and updated to all the teams by email

**There will be no Design Finals:**

Unfortunately, we will not host Design Finals this year due to the additional constraints imposed by the COVID-19 Pandemic.

**Teams will receive written feedback only.**

After the end of the design event, your final scores and feedback will be provided.

### PROCEDURE FOR THE DESIGN EVENT - EV AND CV TEAMS

The design event will be performed online over a virtual conference.

The teams will have a **45 min** design slot including:

- A **5 min to 10 min** presentation of the main design goals along with one or multiple pictures of the car. (For the sake of time and given the reduced time efficiency of an online design event please refrain from introducing your team member one by one)
- A **35 to 40 min** Q&A session divided in rooms according to the areas outlined below. You can showcase your documentation via screen sharing so please have documents, slides and or pictures ready to show to the judges with relevant information.

Each team is allowed up to 15 individual logins.

Please enter your session link 10 min before the scheduled time so that the moderator can accept you into the session and resolve any last-minute issues. The **45 min** time will only count from the start of your presentation.

After the **5 min** presentation, each team member can enter the breakout room relative to their area of expertise according to the following structure (ICE/EV):

Aerodynamics • Powertrain (ICE/EV) • Low power electronics • Structural • Technical management • Vehicle Dynamics

At the end of the **45 min** period please exit the session, you'll be reminded to do so by the room moderator.

### PROCEDURE FOR THE DESIGN EVENT - DV TEAMS

The design event will be performed online over a virtual conference.

The teams will have a **40 min** design slot including:

- A **5 min to 10 min** presentation of the main design goals along with one or multiple pictures of the car. (For the sake of time and given the reduced time efficiency of an online design event please refrain from introducing your team member one by one)
- A **30 to 35 min** Q&A session divided in rooms according to the areas outlined below. You can showcase your documentation via screen sharing so please have documents, slides and or pictures ready to show to the judges with relevant information.

Each team is allowed up to 15 individual logins.

Please enter your session link **10 min** before the scheduled time so that the moderator can accept you into the session and resolve any last-minute issues. The **40 min** time will only count from the start of your presentation.

After the **5 min** presentation, each team member can enter the breakout room relative to their area of expertise according to the following structure (ICE/EV):

Overall Vehicle Concept • Vehicle Performance • Mechanical/Structural Engineering • Tractive System • E/E Architecture • Sensors and Perception  
Localization & Mapping • Planning & Control

At the end of the **40 min** period please exit the session, you'll be reminded to do so by the room moderator.

### UPDATE ON DRIVERLESS CATEGORIES AND POINTS:

Overall Vehicle Concept	75 Points
Vehicle Performance	30 Points
Mechanical/Structural Engineering	20 Points
Tractive System	30 Points
E/E Architecture	35 Points
Sensors and Perception	30 Points
Localization & Mapping	30 Points
Planning & Control	30 Points

## 10.3. COST ANALYSIS EVENT

LOCATION	Online
SCHEDULE	Already provided and updated to all the teams by email

### There will be no Cost Finals:

Unfortunately, we will not host Cost Finals this year due to the additional constraints imposed by the COVID-19 Pandemic.

After the end of the design event, your final scores and feedback will be provided.

For FSS 2021 a DBOM (see S 2.5) for the "Suspension System"

For FSS 2021 a CBOM (see S 2.6) for the "Electrical System" must be submitted.

All CRD must be brought either as hard copy or digital version to the event discussion.

Cost and Manufacturing Event Finals: Cost and manufacturing event finals can be conducted in case the best teams scored the same number of points.

Finalists will be informed two hours prior to the finals.

During the finals each team has 15 min to prepare their answer to 2 questions about cost and manufacturing on a flip chart.

After the preparation time, the team has 15 min for discussion with the judges. Based on the discussion the judges will define the final scoring order of the finalists. The points scored will not change.

## PROCEDURE OF THE COST EVENT

The cost event will be performed online over a virtual conference:

- A 5 min Presentation of the car and the team.
- A 15-20 min Questions and Answers about the coherence between the Cost report and the car, manufacturing processes...
- 5 min Judges' deliberation.

Each team is allowed up to 4 individual logins.

Please enter your session link 10 min before the scheduled time so that the moderator can accept you into the session and resolve any last-minute issues. The **30 min** time will only count from the start of your presentation.



# 11. DYNAMIC EVENTS

## 11.1. GENERAL INFORMATION

### TEAM / DRIVER - BRIEFINGS

<b>LOCATION</b>	To be confirmed
<b>SCHEDULE</b>	See schedule on page 7
<b>ASSISTANTS</b>	<p>ALL TEAM LEADERS must attend all the briefings.</p> <p>ANY DRIVER that wants to drive on a specific day must attend that day's briefing. Drivers must be accredited with the RFID wristband before the briefing.</p> <p>[EV only] At least one ESO must attend the briefings.</p> <p>[DV only] At least one ASR must attend the briefings TEAMS not attending the briefings will be PENALIZED.</p> <p>TEAMS not attending the briefings will be PENALIZED.</p>
<b>GOAL</b>	Present an overview of the event and the details of the specific tests of each day

### ACCESS TO THE DYNAMIC AREA

- Every team receives 4 Dynamic pass vests (The driver pass is included in this 4 passes).
- Dynamic passes are necessary to enter in the dynamic area.
- Every team receives 4 Dynamic pass vests (The driver pass is included in this 4 passes). Dynamic passes are necessary to enter in the dynamic area. Practice Areas, Welding Area, Engine Test, Charging Area and Fuel Station are also considered dynamic areas.
- Credential control will close at the indicated time at the event entrance, only the cars that are inside the "Ready to Race" area will be allowed to start the event.
- Pre-inspection will be opened 30 min before the start time scheduled for each dynamic event.
- No tents, pavilions, tarps, and brooms are allowed in dynamic areas. Only handheld umbrellas allowed. Entering the area after inspection, means "Ready to Race" with driver belted, car adjustments done, cameras on, no tire protections, no tires cleanings etc. Vehicles which are not in "Ready to Race" conditions will be sent back. After inspection area, tool carts are not allowed. After any run the driver must leave the course and drive slowly back to the start line for the second run, to the driver change or to the exit lane.

### WEATHER

- Under normal conditions the track is declared dry.
- If it is necessary to declare damp or wet conditions, there will be signs and announcements at the dynamic area.

## 11.2. EVENTS

### ACCELERATION

LOCATION	Official Track Start line
SCHEDULE	See schedule on page 7

There will be two queues: one for the first run of the team and another queue for the other runs.

[CV & EV only] It's up to each driver to choose whether to drive both runs in a row. If the driver wants to do the second run, it may be done immediately after the first run.

[CV & EV only] The Acceleration will take place during twilight. FSS organization will guarantee appropriate lighting equipment to have a safe event. Special equipment may be used to notify each driver of the start of a run, instead of using a green flag. FSS organization recommends teams to use night helmet visors to ensure good visibility during the event. Teams will be allowed to mount lights on the vehicle just for this dynamic event, according with the requirements specified in rule ES 6.1.3. Teams cannot play loud music in the public stands.

### SKID PAD

LOCATION	IN 2
SCHEDULE	See schedule on page 7

There will be two queues: one for the first run of the first driver of the team and the other one for his second run and both runs of the second driver.

It's up to each driver to choose whether to drive both runs in a row.

If the driver wants to do the second run, it may be done immediately after the first run.

Credential control will close at the indicated time of each part of the event, only the cars that are inside the ready to run area will be allowed to start this event (just one run will be allowed).

Only team members with a Dynamic Pass can wait with the car at the queue.

### AUTOCROSS

LOCATION	Official Track
SCHEDULE	See schedule on page 7

There will be a course walk prior to the event.

There will be two queues: one for the first run of the team and another queue for the other runs.

It's up to each driver to choose whether to drive both runs in a row. Once finished the first run, the driver has the option to exit the track or immediately drive the second run. If the driver exits the track, he/she will need to go to the credential control to drive the second run.

If a yellow flag is shown to a driver during the lap, the run does not count, and an immediate rerun is given for that driver.

In case a car stalls or breaks down, team members can only recover the vehicle under the supervision of the track officials. Short breaks during the event will be arranged to allow recovery of the vehicles.

## AUTOCROSS [DV ONLY]

LOCATION	Official Track
SCHEDULE	See schedule on page 7

There will be a course walk prior to the event.

There will be two queues: one for the first run of the team and another queue for the other runs.

## TRACKDRIVE [DV ONLY]

LOCATION	Official Track
SCHEDULE	See schedule on page 7

All cars that finish the Track drive event will be conducted directly to the Park Fermé. Any car (Combustion or Electric) can be inspected for rules compliance after the Track drive. [CV only] All cars that finish the Track drive event will be conducted directly to the refuelling station. [EV only] The energy meter responsible will collect the energy data from all cars that finish the Track drive.

## ENDURANCE

LOCATION	Official Track
SCHEDULE	See schedule on page 7

The results of the Autocross event will serve to decide the order for the Endurance event.

The Endurance event will consist of different stings.

Only team members with a valid a Dynamic Pass may follow their car up to the staging area.

During the driver change, two scrutineers will check the car.

Cars who get a blue flag please drive into the next overtaking lane. Please start braking / slowing down when you are in the overtaking lane NOT before. Wait until the track marshal shows green flag to re-enter to the track.

All cars that finish the Endurance event will be conducted directly to the Park Fermé.

## PARC FERMÉ

LOCATION	Official Track
SCHEDULE	See schedule on page 7

All Cars that complete the Endurance will go to the Parc Fermé. The energy meter responsible will collect the energy data from the cars. Any car (Combustion or Electric) can be inspected for rules compliance after the Endurance.

## 12. AWARDS

### COMBUSTION VEHICLES

Combustion Champion Formula Student Spain

Combustion 2nd Formula Student

Combustion 3rd Formula Student Spain

### ELECTRIC VEHICLES

Electric Champion Formula Student Spain

Electric 2nd Formula Student Spain

Electric 3rd Formula Student Spain

### DRIVERLESS VEHICLES

Driverless Champion Formula Student Spain

# 13. HOW TO ARRIVE

## ADDRESS

CIRCUIT DE BARCELONA- CATALUNYA  
Carretera Granollers  
Parets, km 2  
08160 Montmeló,  
Barcelona (Spain)  
GPS Coordinates:  
Longitude 2.255995 Latitude 41.572196



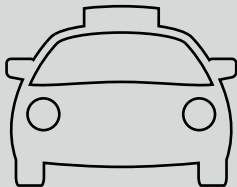
## SITUATION





## HOW TO ARRIVE TO CIRCUIT DE BARCELONA-CATALUNYA

### TRAVELLING BY CAR:



#### FROM SPAIN

The highway AP-7 is near the circuit. You have exits number 13, 14 or 15 to reach the Circuit. If you take the road C-17 you should take the exit to Montmeló.

#### FROM THE REST OF EUROPE

Follow the A9 / E15 / E80 / Barcelona/Toulouse/Narbonne/Béziers-Ouest to A9 / E15 / E80, continue to A9 / E15 to AP-7 highway (exits number 13, 14 or 15) or C-17 road.

### TRAVELLING BY PLANE:

#### FROM BARCELONA AIRPORT TO CIRCUIT DE BARCELONA - CATALUNYA

BY TRAIN (Renfe)  
BY BUS (Sagales)

#### FROM BARCELONA AIRPORT TRAIN STATION TO MONTMELÓ TRAIN STATION

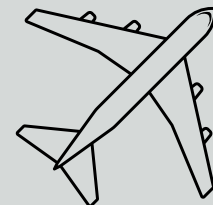
OFFICIAL WEBSITE: [www.renfe.com](http://www.renfe.com)

The RENFE train services runs approximately every 30 minutes from Barcelona Airport to the City Centre (Travel time approximately 25 minutes). From the Airport you can get off at Barcelona Sants, Passeig de Gràcia or Clot Stations. From all of them you can take the train to Montmeló Station.

#### FROM MONTMELÓ TRAIN STATION TO CIRCUIT DE BARCELONA-CATALUNYA

OFFICIAL WEBSITE: [www.sagales.com](http://www.sagales.com)

Sagalés is the bus service that connects the Montmeló Train Station with the Circuit de Barcelona-Catalunya. For more details, you can visit Sagales website



# 15. ADDITIONAL INFORMATION

## 15.1. GENERAL SERVICES

### PHARMACIES

Mil-lenari	Plaça Mil-lenari, 7, 08160 Montmeló	+34 935 722 817
Mil-lenari (2)	Passatge Monturiol, 7, 08160 Montmeló	
MARIA ANTONIA FAJAS FANES	Av. Pompeu Fabra, 10, 08160 Montmeló	+34 935 680 288
CASULLERAS	Carrer de la Diputació, 17, 08160 Montmeló	+34 935 681 718
Isern Cartro SCP	Avinguda de Vilardebó, 6, 08160 Montmeló	+34 935 684 895
Balcells, C.B.	Carrer Federico Garcia Lorca, 4, 08170 Montornès del Vallès	+34 935 680 899

### SUPERMARKETS

Condis	Carrer Major, 13, 08160 Montmeló	+34 935 681 863
DIA	Carrer de la Diputació, 6, 08160 Montmeló	
SORLI DISCAU	C/ Federico Garcia Lorca, 14, 08160 Montmeló	+34 935 610 606
LIDL	Av. Del Riu Mogent, 6-8, 08170 Montornès del Vallès	+34 902 243 222
Mercadona	C/ del Comte Montemolin, 08150 Parets del Vallès	+34 936 343 436
CAPRABO	C/ Gran Vial, 1, 08170 Montornès del Vallès	+34 935 684 404
Mercadona	C/ Can Flequer, 08100 Mollet del Vallès	+34 938 823 358
DIA	Av Dels Rabassaires s/n, 08100 Mollet del Vallès	+34 902 453 453

### RESTAURANTS

Telepizza	Carrer de Can Parera, 20, 08170 Montornès	+34 935 722 728
Viena	Carrer de la Verneda del Congost, s/n, 08160 Montmeló	+34 935 689 940
Mc Donalds	PARETS Carrer Comte Montemolin, 16, 08150 Parets del Vallès	+34 935 730 582
Restaurante Familia Feliz	Avinguda del Mil-lenari, 08160 Montmeló	+34 935 681 052
Restaurant & Lounge 113	Carrer Vic, 113, 08160 Montmeló	+34 935 687 812
Bar Restaurante El Pedregal	Carrer de la Indústria, 08160 Montmeló	+34 935 683 825
Bar Restaurante Can Raiguer	Poligono industrial El Raiguer Nave 19, 08170 Montornès del Vallès	+34 935 723 649
Restaurante Via Augusta	C/ Major, 51, 08160 Montmeló	+34 935 682 866

**AUTOMOTIVE PARTS SUPPLIERS**

MOTOCARD	C/València 511, 08005 Barcelona	+34 932 650 224
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**TIPS FOR WEBSEARCH & USEFUL WEBS**

Ajuntament de Montmeló	<a href="http://www.montmelo.cat">www.montmelo.cat</a>
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Circuit de Catalunya-Barcelona	<a href="http://www.circuitcat.com">www.circuitcat.com</a>
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Ajuntament de Barcelona	<a href="http://www.bcn.cat/en">www.bcn.cat/en</a>
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**BANKS**

BBVA	Av. Pompeu Fabra, 16, 08160 Montmeló	+34 935 720 029
Banco Santander	Av. Pompeu Fabra, 1, 08160 Montmeló	+34 935 680 092
Banco Popular	C/Major, 2, 08160 Montmeló	+34 935 799 291
Banco Sabadell	C/Major, 3, 08160 Montmeló	+34 902 323 000
Caixa Penedès	C/Major, 16, 08160 Montmeló	+34 935 720 866

**TYRE CHARGING SERVICE**

Pneus Expert	Carrer Telègraf, 20, 08160, Montmeló Open weekdays from 9h to 19h; Saturday from 9h to 13h.	+34 938 601 792
PINCHAZOS Y NEUMATICOS 24H	Carrer Tarragona, 101-103, 08014, Barcelona Open 24hs	+34 934 261 356

# 16. JOIN US

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SOCIEDAD DE TÉCNICOS DE AUTOMOCIÓN

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COLLABORATORS



## SILVER SPONSOR

With over 25 years of history, Applus+ IDIADA is a leading engineering company providing design, testing, engineering and homologation services to the automotive industry worldwide. Applus+ IDIADA counts with more than 2,500 engineers specialized in vehicle development drawn from over 40 different countries. The headquarters, composed by a 360-hectares main technical center which includes its own proving ground and a comprehensive set of laboratories, is located near Barcelona, Spain. The company also has an international network of subsidiaries and branch offices in 22 countries which ensures that their clients receive fast and customized services.



Applus + IDIADA recognizes this event as a bridge to find solutions to new current and future mobility challenges. This year, apart from being the principal sponsor, Applus+ IDIADA will support the event with more than 30 volunteers to provide Technical Scrutineering. In that way, Formula Student participants not only have outstanding technical skills but also personal competences that will be an asset to the companies where they will work in the future:

- Creativity - to put forward new ideas and innovative solutions
- Decisiveness - to make and carry out decisions quickly and correctly
- Proactiveness - to work in a team towards the attainment of common goals
- Passion - the secret weapon to develop a successful career

At IDIADA, we appreciate and understand the challenge you are overcoming by designing and building a vehicle capable of participating at Formula Student. Congratulations and enjoy the competition!

**INNOVATING FOR SAFER  
AND MORE SUSTAINABLE MOBILITY**

*Let's do it  
together!*  
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### DOGA

DOGA is a family company founded in 1958 in Barcelona (Spain) by Antonio Garcia Domingo. The company boasts 60 years of experience in the development and production of automotive components.

With affiliated companies in Italy, Poland, the USA, Mexico, Brazil, China and India, we export our products to more than 70 countries and operate in multiple markets, including passenger cars, commercial vehicles, bus & coach, trains, agriculture and construction machinery, boats and motorcycles.

## COLLABORATOR

The Computer Vision Center (CVC) is a non-profit institution founded in 1995 as a Consortium formed by the Generalitat de Catalunya and the Universitat Autònoma de Barcelona (UAB) and located at the UAB's Bellaterra Campus. With an outstanding team of more than 130 researchers and technicians, 2000 m<sup>2</sup> devoted to R&D and the most advanced resources in hardware and software, the CVC now holds an international reputation for innovative research and technology transfer in the field of Computer Vision. Its mission is to develop prestigious research with international impact, transferring knowledge to companies and society, and training scientists and high-level professionals.



The CVC performs exciting and pioneering research in Computer Vision, working on the main problems of humanity, on the great challenges proposed by the European Union: Health (cancer diagnosis, wellbeing for the elderly, assistance to the disabled), Industry (sustainable farming, recycling, industry 4.0, optimization of resources and quality control), Mobility (Advanced Driver Assistance Systems, traffic accident prevention, smart cities) and Culture (cultural heritage exploitation, democratisation of our past, open access to libraries and archives).

CVC's expertise has brought the center to a leading position in the Computer Vision and Pattern Recognition fields and it is considered a reference in elevating R&D impact in society. CVC also benefits from the success and added value brought about from its patents and the setting up of spin-off companies, as well as working with the best companies worldwide. The CVC also carries out Ph.D. research and thesis tutoring for Ph.D. students, supports the master's degree Program in Computer Vision (UAB, UPC, UPF) and have a year-round schedule of seminars and other introductory and advanced courses in Computer Vision topics.



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