

# FSS

FORMULA STUDENT SPAIN

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HANDBOOK  
HNBK  
FSS2022

12TH EDITION

This HANDBOOK RELEASE (RELEASE\_01) is the FIRST VERSION. FSS organization will not distribute this document as a printed document at the Ticket Centre, at the moment of Team Registration on Monday, 29th August 2022. 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 350 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 70 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. In addition, here you have information about the closest Medical Center to the Circuit Parcmotor Castellolí.

### **HOSPITAL**

HOSPITAL UNIVERSITARI D'IGUALADA  
Av. De Catalunya, 11  
+34 93 8075500

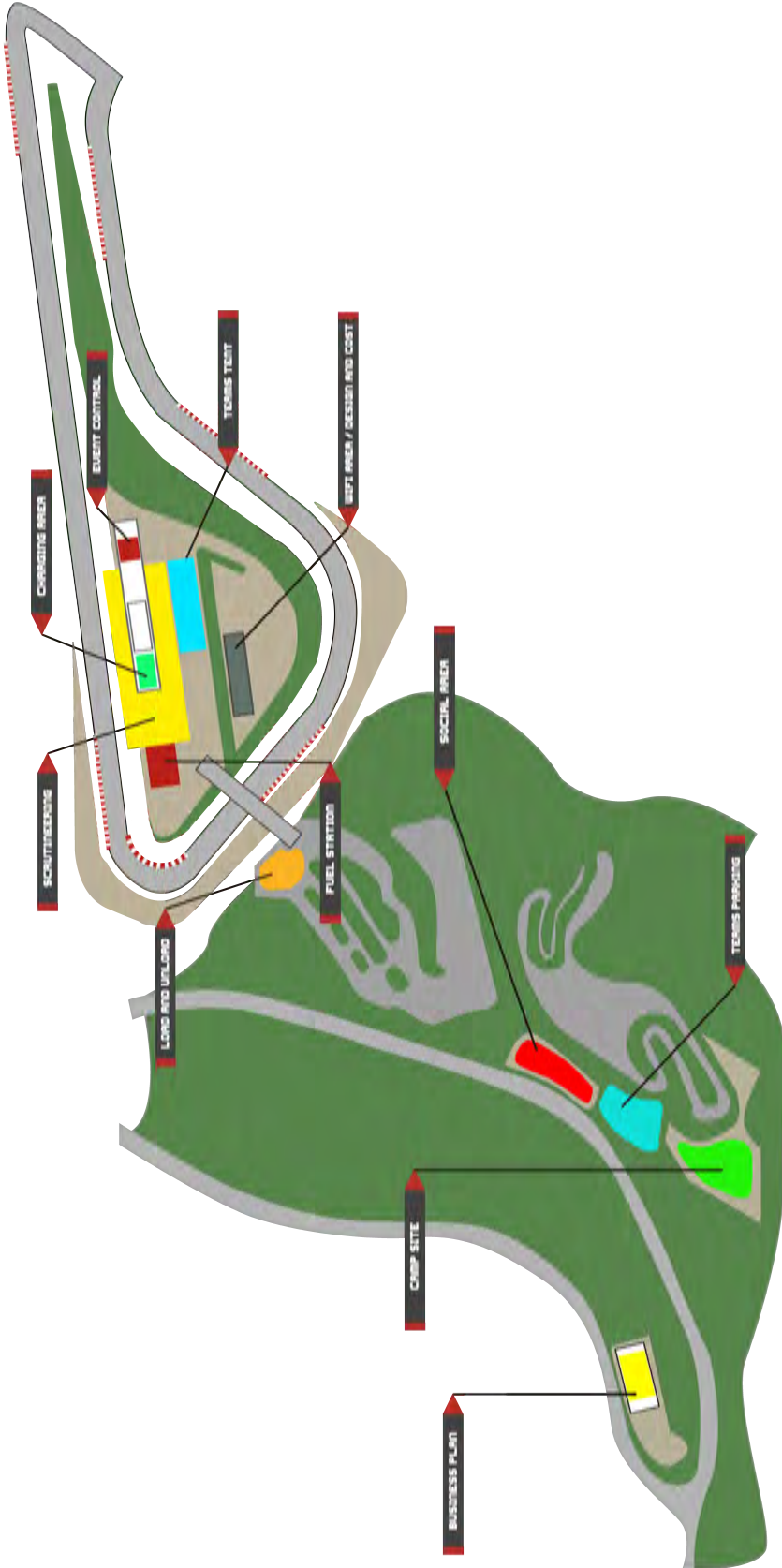
## **IF IT IS A SEVERE INJURY:**

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

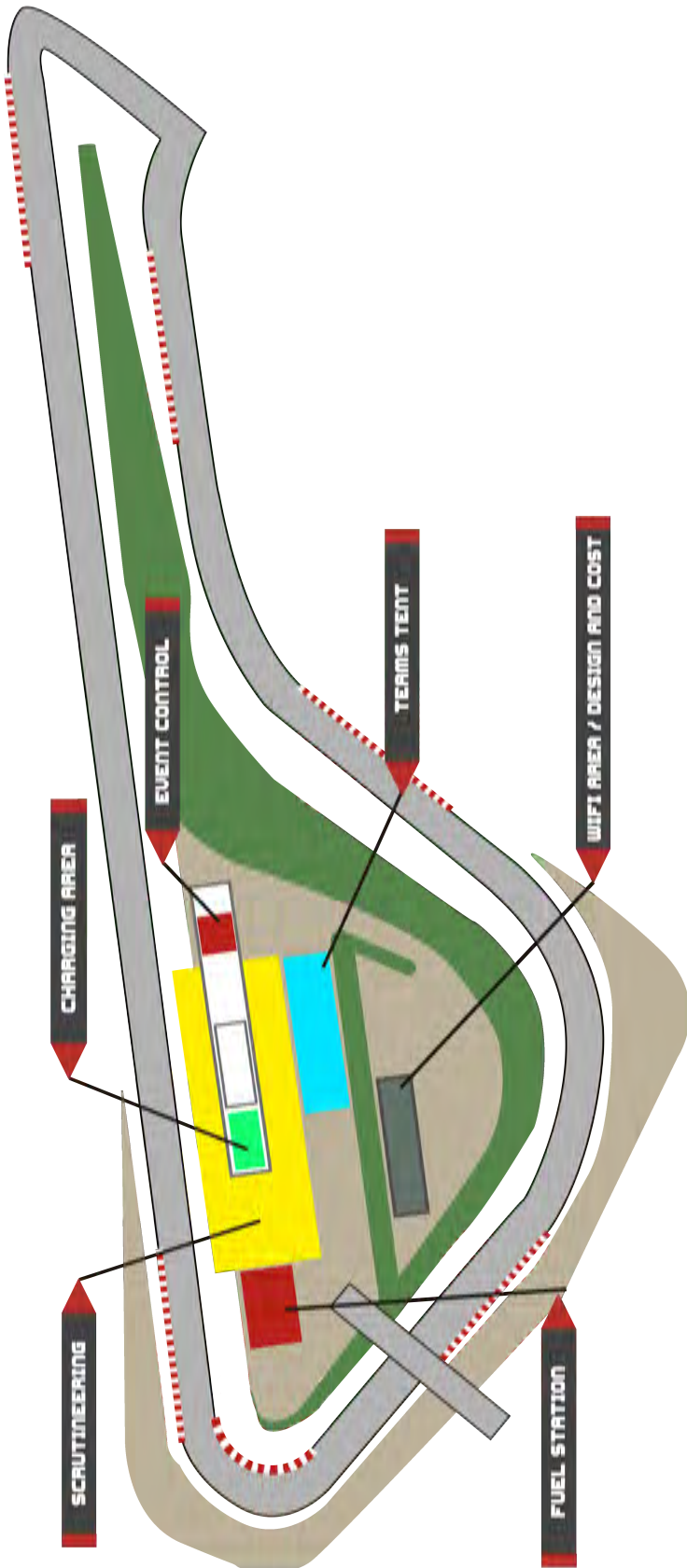
**THE EMERGENCY  
NUMBER IS:**

# 112

# 02. SITE PLAN



## 02. SITE PLAN



## 03. SCHEDULE

### MONDAY, 29<sup>TH</sup>

10:00h – 19:00h	Registration	Ticket Centre
10:00h-14:00h & 15:00h-20:00h	Event control	Box 3
09:00h – 22:00h	Pits Open/Close	Pits
16:00h – 19:00h	Pre-Scrutineering	Box 5*
21:00h – 22:00h	Teams Welcome	Paddock

### TUESDAY, 30<sup>TH</sup>

07:30h – 08:30h	Team Briefing	Paddock 2 building
08:00h – 22:00h	Pits Open/Close	Pits
10:00h-14:00h & 15:00h-20:00h	Event control	Box 3
10:00h – 14:00h	Drivers and ESO Registration	Box 3
09:00h – 19:00h	Scrutineering & Tech Inspection	Pits 4 to 10
11:00h – 18:00h	Engineering Design Event	Paddock 2 building
11:00h – 18:00h	Cost & Manufacturing Event	Paddock 2 building
09:00h – 19:00h	Business Plan Event	Campus Parcmotor Anoia
09:00h-14:00h & 15:00h-20:00h	Charging & High Voltage Area	Pits 11 & 12
09:00h-14:00h & 15:00h-19:00h	Welding Area	Official Track
10:30h-14:00h & 15:00h-19:00h	Engine Test Area (Under Request)	OfficialTrack
10:30h-14:00h & 15:00h-19:00h	Fuel Station	Paddock
15:00h – 19:00h	Practice Area (Under Request)	Official Track
15:00h – 19:00h	Driverless Practice Area	Parcmotor Fast Tack

### WEDNESDAY, 31<sup>TH</sup>

07:30h – 08:30h	Team Briefing	Paddock 2 building
08:00h – 22:00h	Pits Open/Close	Pits
09:00h-14:00h & 15:00h – 20:00h	Event control	Box 3
09:00h – 19:00h	Scrutineering & Tech Inspection	Pits 4 to 10
09:00h – 18:00h	Engineering Design Event	Paddock 2 building
09:00h – 18:00h	Cost & Manufacturing Event	Paddock 2 building
09:00h – 13:00h	Business Plan Event	Campus Parcmotor Anoia
18:00h – 20:00h	Business Plan Finals	Campus Parcmotor Anoia
19:00h – 21:00h	Engineering Design Finals – DV	Paddock 2 building
09:00h-14:00h & 15:00h – 20:00h	Charging & High Voltage Area	Pits 11 & 12
09:00h-14:00h & 15:00h – 19:00h	Welding Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Engine Test Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Fuel Station	Paddock
09:00h-14:00h & 15:00h – 19:00h	Practice Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Driverless Practice Area	Parcmotor Fast Tack

### THURSDAY 1<sup>ST</sup>

07:00h – 08:00h	Team Briefing	Paddock 2 building
07:30h – 22:00h	Pits Open/Close	Pits
09:00h-14:00h & 15:00h – 20:00h	Event control	Box 3
09:00h – 19:00h	Scrutineering & Tech Inspection	Pits 4 to 10
09:00h – 13:00h	Engineering Design Event	Paddock 2 building



## THURSDAY, 1<sup>ST</sup>

09:00h – 13:00h	Cost & Manufacturing Event Engineering	Paddock 2 building
19:30h – 21:30h	Design Finals – EV, CV Charging & High Voltage Area	Paddock 2 building
09:00h-14:00h & 15:00h – 20:00h	Welding Area	Pits 11 & 12
09:00h-14:00h & 15:00h – 19:00h	Engine Test Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Fuel Station	Official Track
09:00h-14:00h & 15:00h – 19:00h	Practice Area	Paddock
09:00h-14:00h & 15:00h – 19:00h	Driverless Practice Area	Official Track
09:00h – 12:00h	Acceleration Driverless	Parcmotor Fast Track
16:00h – 19:00h	Skid Pad Driverless	Official Track
		Paddock 1

## FRIDAY, 2<sup>ND</sup>

07:00h – 07:45h	Team Briefing	Paddock 2 building
07:30h – 01:00h (+1Day)	Pits Open/Close	Pits
08:00h – 08:15h	Autocross Driverless coursewalk	Parcmotor Fast Track
08:30h-14:00h & 15:00h – 20:00h	Event control	Box 3
09:00h-14:00h & 15:00h – 20:00h	Charging & High Voltage Area	Pits 11 & 12
09:00h-14:00h & 15:00h – 19:00h	Welding Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Engine Test Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Fuel Station	Paddock 1
09:00h-14:00h & 15:00h – 19:00h	Practice Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Driverless Practice Area	Parcmotor Fast Track
09:00h – 12:00h	Autocross Driverless	Parcmotor Fast Track
15:00h – 19:00h	SkidPad	Paddock 1
21:00h – 00:30h (+1 day)	Acceleration	Official Track

## SATURDAY 3<sup>RD</sup>

07:00h – 08:00h	Team Briefing	Paddock 2 building
7:30h – 22:00h	Pits Open/Close	Pits
08:00h – 08:15h	Autocross Coursewalk	Official Track
08:30h-14:00h & 15:00h – 20:00h	Event control	Box 3
09:00h-14:00h & 15:00h – 20:00h	Charging & High Voltage Area	Pits 11 & 12
09:00h-14:00h & 15:00h – 19:00h	Welding Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Engine Test Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Fuel Station	Paddock 1
09:00h-14:00h & 15:00h – 19:00h	Practice Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Driverless Area	Parcmotor Fast Track
09:00h – 12:00h	Autocross	Official Track
16:00h – 20:00h	Trackdrive Driverless	Parcmotor Fast Track

## SUNDAY 4<sup>TH</sup>

07:00h – 07:30h	Team Briefing	Paddock 2 building
7:00h – 22:00h	Pits Open/Close	Pits
08:00h – 08:15h	Endurance Coursewalk	Official Track
08:00h-14:00h & 15:00h – 20:00h	Event control	Box 3
09:00h-14:00h & 15:00h – 20:00h	Charging & High Voltage Area	Pits 11 & 12
09:00h-14:00h & 15:00h – 19:00h	Welding Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Engine Test Area	Official Track
09:00h-14:00h & 15:00h – 19:00h	Fuel Station	Paddock 1
09:00h-15:00h	Practice Area	Paddock 1
09:00h – 19:00h	Parc Fermé	Official Track
09:00h – 15:00h	Endurance	Official Track
15:00h – 18:00h	Endurance Finals	Official Track
19:30h – 20:30h	Teams photo	Official Track
21:30h – 22:30h	Awards Ceremony	Official Track

# 04. EVENT INFORMATION

## 04.1. TICKET CENTRE

LOCATION	Main Entrance, see site plan
SCHEDULE	See schedule on pages 15 and 16

### SERVICES

- Team Registration (Event & Campsite)
- Vehicle Passes
- Vests, wristbands and badges

Deposits for Dynamic, ESO, ASR and Media Vests, Transponder and Energymeter, should be paid through the following link before the event:

[Formula Student Spain 2022 | Vests, Energymeter and Transponder](#)

We strongly recommend you pay the campsite fee in advance through the link:

[Formula Student Spain 2022 | Campsite payment](#)

## 04.2. TEAM ALLOCATION

The teams will be in a tent built in the Paddock 1.  
Each team will have a designated space of 3 x 5m.

























# 05. PARTICIPATING TEAMS

## 05.1 COMBUSTION





















	TEAM	UNIVERSITY	CAR	PIT
	Aixtreme Racing	FH Aachen	371	1
	MAD Formula Team	Universidad Carlos III de Madrid	373	4
	Ü Motorsport	Universidad Rey Juan Carlos	296	3
	BlueStreamline	Transilvania University of Brasov	111	5
	Dynamics UPC Manresa	UPC Manresa - EPSEM	225	6
	Formula Gades	University of Cádiz	212	7
	MART	Universidad de Málaga	364	8
	E-Team Squadra Corse	Università di Pisa	243	9
	UVigo Motorsport	Universidade de Vigo	314	10
	Metz Racing Team	ENIM	257	11
	UJI Motorsport FS Team	Universitat Jaume I	214	12
	UniBo Motorsport	University of Bologna	288	13
	FSUPV Team	Universitat Politècnica de València	595/395	14
	Formula UEM	Universidad Europea de Madrid	283	15
	Vilanova Formula Team	EPSEVG	280	16

## 05.2 ELECTRIC COMPETITION

	TEAM	UNIVERSITY	CAR	PIT
	Scuderia Mensa HS RheinMain Racing	UAS RheinMain	65	18
	e-Tech Racing	UPC EEBE Barcelona	79	19
	ISC FS Racing Team	Comillas Pontifical University	133	20
	Bern Formula Student	Bern University of Applied Sciences	107	21
	BCN eMotorsport	UPC Barcelona	454/54	22
	TUfast Racing Team	Technical University Munich	31	23
	munichMotorsport e.V.	UAS Munich	13	24
	High-Octane Motorsports e.V.	Friedrich-Alexander-Universität Erlangen-Nürnberg	149	25
	Fast Forest	Deggendorf Institute of Technology	444/44	26
	Formula Student Team Weingarten	University of Applied Sciences Ravensburg-Weingartentechnology	30	27
	Uniovi eTech Racing	University of Oviedo	28	28
	FSULL-Dynamics	University of La Laguna	85	29
	HAWKS Racing e.V.	UAS Hamburg	69	30
	GreenTeam Uni Stuttgart	University of Stuttgart	26	31
	BRS Motorsport	Hochschule Bonn-Rhein-Sieg	45	32
	UPC ecoRacing	UPC Terrassa	421/21	33
	Tecnun eRacing	Tecnun - University of Navarra	56	34
	Team Bath Racing Electric	University of Bath	27	35
	Strohm und Söhne e.V.	Technische Hochschule Nürnberg Georg Simon Ohm	60	36
	Infinity Racing	Hochschule Kempten	51	37
	Bodensee Racing Team	HTWG Konstanz	43	38
	Global Formula Racing	DHBW Ravensburg	2	39

# 05. PARTICIPATING TEAMS









## 05.2 ELECTRIC COMPETITION

	TEAM	UNIVERSITY	CAR	PIT
	Tu Darmstadt Racing Team e.V.	TU Darmstadt	24	40
	Elbflorace e.V.	TU Dresden	459/59	41
	Running Snail Racing Team	Ostbayerische Technische Hochschule (OTH) Amberg-Weiden	23	42
	FSB Racing Team	University of Zagreb	18	43
	HorsePower Hannover e.V.	Leibniz Universität Hannover	22	44
	eMotorsports Cologne	UAS Cologne	12	45
	PUT Motorsport	Poznan University of Technology	7	47
	FST Lisboa Driverless	University of Lisbon - Instituto Superior Técnico	450/50	48
	Formula Student Bizkaia	University Of the Basque Country	48	49
	Ignition Racing Team electric	UAS Osnabrueck	167	50
	Sapienza Fast Charge	Sapienza Università di Roma	180	51
	KaRaT - Kaiserslautern Racing Team e.V	Technical University Kaiserslautern	464/64	52
	Raceyard E	UAS Kiel	53	54
	EPFL Racing Team	EPFL	127	56
	E-Team Duisburg-Essen e.V.	Universität Duisburg-Essen	140	57
	Blue Fast Mobility Concepts	HAWK	161	58
	Formula Technion	Technion	19	59
	HofSpannung Motorsport e.V.	UAS Hof	128	60
	ISEL Formula Student	Instituto Superior de Engenharia de Lisboa	3	61
	WHZ Racing Team	Westfälische Hochschule Zwickau	96	62

## 05.3 DRIVERLESS COMPETITION (COMBUSTION)

	Ü Motorsport DV	Universidad Rey Juan Carlos	596	2
	FSUPV Team	Universitat Politècnica de València	595/395	14

## 05.4 DRIVERLESS COMPETITION (ELECTRIC)

	BCN eMotorsport	UPC-Barcelona	454/54	22
	UPC ecoRacing	UPC Terrassa	421/21	33
	Elbflorace e.V.	TU Dresden	459/59	41
	AMZ Racing	ETH Zürich	433	46
	FST Lisboa Driverless	University of Lisbon - Instituto Superior Técnico	450/50	48
	KaRaT - Kaiserslautern Racing Team e.V	Technical University Kaiserslautern	464/64	52
	AGH Racing	AGH University of science and technology	411	53
	University Racing Eindhoven	Eindhoven University of Technology	440	55

# 06. REGISTRATION & ACCESS TO THE CIRCUIT

**LOCATION** Main Entrance

**SCHEDULE** Monday, **August 29th**, 2022 / 10.00h – 19.00h

The Registration procedure for:

- Team members
- Vehicles (load & unload and parking areas)
- Campsite

If the registration process has not been completed successfully, team members will not have access to the Circuit Parcmotor, neither the assigned pir nor the campsite area.

## 06.1. TEAM REGISTRATION

There are time slots for the registration, see pages 14 and 15. Upon arrival, a FSS staff member will show you where to park your vehicles until your registration slot. The queues layout and the how to enter procedure will be sent via the official email to the teams on Sunday 28th of August.

FSS staff members will ask you to drive until the Ticket Centre following the arrival order and slots. Team leader must deliver the FINAL TEAM MEMBER DESIGNATION document, signed by all the team members that are going to attend the competition.

At the end of the registration procedure, team leaders will receive all necessary badges, wristbands, vests, and vehicle passes to enter the venue and compete at FSS2022.

Transponder and energy meter will be delivered at the event control.

## 06.2. DRIVERS REGISTRATION

Driver registration will be at the event control, on Tuesday, August 30th 2022 at 10:00h.

Teams can register no more than 6 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.

## 06.3. ELECTRICAL SYSTEM OFFICER

Each electric team must register, at least, one electrical system officer (ESO) at the event control, on Tuesday, August 30th 2022. 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.

## 06.4. PARKING & VEHICLE ENTRANCE PASSES

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

1. Entrance pass for loading/unloading in the paddock. This vehicle pass must be returned to FSS staff once the team has finished. No vehicles will be allowed to park in the paddock. The teams will have 30 minutes to unload the material at the paddock.
2. Vehicle passes for the passenger vehicles to park in the Teams Parking (see site plan). These passes must be filled out with the following information:

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

Trucks and buses will have their own parking area close to the venue, see truck parking on site plan. 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

## 06.5. VISITORS

The visitors will be only allowed to enter the Parcmotor Castellolí Saturday and Sunday. The visitors entrance will be opened 30minutes prior to the first dynamic event.

The total number of visitors is limited. Therefore, visitors must be requested in advance during the On-Site team registration. Visitors do not have access to the campsite.



## 06.6. REGISTRATION TIME SLOTS

FST Lisboa & FST Lisboa DV	10:00h – 11:00h
University Racing Eindhoven	10:00h – 11:00h
BCN eMotorsport & BCN eMotorsport DV	10:00h – 11:00h
GreenTeam Uni Stuttgart & DV	10:00h – 11:00h
UniBo Motosport	10:00h – 11:00h
Global Formula Racing EV	10:00h – 11:00h
Hawks Racing e.V.	10:00h – 11:00h
TUfast Racingteam	11:00h – 12:00h
FS UPV Team & DV	11:00h – 12:00h
Raceyard E	11:00h – 12:00h
TU Darmstadt Racing Team e.V.	11:00h – 12:00h
Elbflorace e.V. & DV	11:00h – 12:00h
UPC ecoRacing & DV	11:00h – 12:00h
AMZ Racing	11:00h – 12:00h
Horsepower Hannover e.V.	12:00h – 13:00h
Formula Student Vitoria	12:00h – 13:00h
Fast Forest	12:00h – 13:00h
KaRaT – Kaiserslautern Racing Team & DV	12:00h – 13:00h
AGH Racing	12:00h – 13:00h
WHZ Racing Team	12:00h – 13:00h
BRS Motorsport	12:00h – 13:00h
Strohm und Söhne e.V.	13:00h – 14:00h
Scuderia Mensa HS ReheinMain Racing	13:00h – 14:00h
Sapienza Fast Charge	13:00h – 14:00h
Bodenensee Racing Team	13:00h – 14:00h
ÜMotosport & DV	13:00h – 14:00h
FSULL Dynamics	13:00h – 14:00h
Dynamics UPC Manresa	13:00h – 14:00h
MAD Formula Team	14:00h – 15:00h
E-Team Squadra Corse	14:00h – 15:00h
Metz Racing Team	14:00h – 15:00h
UJI Motorsport FS TEAM	14:00h – 15:00h
ISC FS Racing Team	14:00h – 15:00h

## 06.6. REGISTRATION TIME SLOTS

MART	14:00h – 15:00h
Formula Gades	14:00h – 15:00h
Formula UEM	15:00h – 16:00h
Formula Student Bizkaia	15:00h – 16:00h
munichMotorsport e.V.	15:00h – 16:00h
Ignition Racing Team electric	15:00h – 16:00h
Team Bath Racing Electric	15:00h – 16:00h
EPFL Racing Team	15:00h – 16:00h
Tecnun eRacing	15:00h – 16:00h
Running Snail Racing team	16:00h – 17:00h
eMotorsport Cologne	16:00h – 17:00h
Uvigo Motorsport	16:00h – 17:00h
e-Tech Racing	16:00h – 17:00h
Bern Formula Student	16:00h – 17:00h
ISC FS Racing Team	16:00h – 17:00h
Uniovi eTech Racing	17:00h – 18:00h
Aixtreme Racing	17:00h – 18:00h
Vilanova Formula Team	17:00h – 18:00h
FSB Racing Team	17:00h – 18:00h
High-Octane Motorsports e.V.	17:00h – 18:00h
Baltic Racing	17:00h – 18:00h
PUT Motorsport	18:00h – 19:00h
Infinity Racing	18:00h – 19:00h
Formula Student Team Weingarten	18:00h – 19:00h
ISEL Formula Student	18:00h – 19:00h
E-Team Duisburg-Essen e.V.	18:00h – 19:00h
BlueFast Mobility Concepts	18:00h – 19:00h
Formula Technion	18:00h – 19:00h
Hofspannung Morosport e.V	18:00h – 19:00h
BlueStreamline	18:00h – 19:00h



# 07. GENERAL GUIDELINES

## 07.1. 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's welcome ceremony.

Specific rules and event updates for each day will be announced during the Teams briefing. The team leaders, drivers for the day, and ESO's are mandatory to assist to the daily briefing.

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

## 07.2 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.

## 07.3 FIRES AND SMOKING

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.

## 07.4 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.

## 07.5 ALCOHOLIC DRINKS

### FORBIDDEN

Alcoholic drinks are completely forbidden inside the competition area.

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

### ALLOWED

The alcoholic drinks are allowed inside the campsite area.

Every participant will be accounted responsible of their acts.

## 07.6 ENERGMETERS

All electric teams must pay 50€ deposit for the energy meter following the link provided in FSS Rules according to ES 9.6.2.

The energy meter will be provided at the event control from Tuesday 30th of August. The first eight teams on the scrutineering order list will receive the energymeters at the event control on Monday 29th of August, at 20:00h.

Teams must prepare the connectors and cables required for the energy meter operation. These connectors and cables must be ready for operation during FSS 2022 competition.

The teams are responsible to ensure the proper functioning of the energy meter.

**IMPORTANT:** Energy meter should be dismantled from the car and returned to the energy meter responsible on Sunday 4th by 20:00h on Park Fermé. Those electric teams that reach the Park Fermé can dismantle the energy meter on the Park Fermé. Once the energy meter is given to the organization the receipt will be handed over the team.

The return of the deposit will take place in the Event Control on Sunday 4th of September at 19.00h to 20.30h. Please bring the receipt.

## 07.7. TRANSPONDERS

The transponder needs to be installed prior the Endurance. The transponder will be supplied at the event control on Saturday 3rd of September around 18.00h.

All teams must pay 50 € deposit for the TRANSPONDER following the link provided in FSS Rules according ES 9.6.2.

**IMPORTANT:** Transponder should be dismounted from the car and returned to the FSS responsible on Sunday 4th by 20:00h on Event Control. All teams that reach the Park Fermé can dismount the transponder on the Park Fermé. Once the transponder is given to the organization the receipt will be handed over the team. The return of the deposit will take place in the Event Control on Sunday 4th of September at 19.00h to 20.30h. Please bring the receipt.

## 07.8 CAMPSITE GENERAL GUIDELINES

The teams must request the surface (in m<sup>2</sup>) that need to camp. Please remind that the space is limited. FSS Organization will assign the spaces accordingly to the number of team members coming to the campsite, and FSS Organization will inform the teams which requests cannot be satisfied.

Social area will be open until 2am from Monday to Saturday. On Sunday it will be open until 3am. Anyone remaining in the social area after these hours will be penalized.

### Penalties:

- **1st warning:** No points will be removed from the team.
- **2nd warning:** Team will get minus 25 points per person.
- **3rd warning:** Team will be excluded from the FSS competition.

Cleaning services are planned daily. It only includes floor sweeping and garbage bin collection. It is not allowed to leave any garbage on the tables. Please, keep the spaces/tables clean when you finish their use.

### POOLS:

Due to the limited space in the social area, pools are not allowed. FSS Organization will provide a “refreshing area” close to the social area.

### BBQ:

Due to the drought that the country is suffering, the use of barbecues in the social area is strictly forbidden. FSS Organization is in constant contact with the local authorities for this matter. If the restriction is lifted, the teams will be informed in the briefing.

## 07.9. FORMULA STUDENT SPAIN 2022 RULES

Formula Student Spain 2022 competition will comply with Formula Student Rules 2020, which were sent to the participating teams by email.

Formula Student Spain 2022 Rules include some specific rule changes and additions. These rules supersede all other rules. As it has been stated in Formula Student Spain 2022 Rules in ES 1.1.6, the officials reserve the right to revise the schedule of the competition and/or interpret or modify the competition rules at any time and in any manner that is, in their sole judgment, required for safe and efficient operation.

All Officially published documents related to the rules are also mandatory.

Any questions or ambiguities concerning Formula Student Spain 2022 Rules will be resolved by the Formula Student Spain 2022 Rules team.

Specific rules-related questions should be sent to the following address ([rules@formulastudent.es](mailto:rules@formulastudent.es)) by the team´s leader. Formula Student Spain 2022 rules team will provide an answer via email.

## 08. TECHNICAL INSPECTION

**LOCATION**      Boxes    5-14

**SCHEDULE**      See Schedule on Pages 8 and 9

### ELECTRIC CARS

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

- Acumulator Inspection
- Electrical Inspection
- Mechanical Inspection
- Tilt Test
- Rain Test
- Brake Test

### ELECTRIC DRIVERLESS CARS

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

- Acumulator Inspection
- Electrical Inspection
- Driverless Inspection
- Mechanical 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.

- Mechanical Inspection
- 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 and compete on Dynamic Events.

- Pre-inspection
- Mechanical Inspection Driverless Inspection
- Tilt Test
- Noise Test
- Brake Test
- Emergency Brake System Test

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 practice at the test track.

## 08.1. PRE-INSPECTION

Pre-inspection will be conducted in the pit, where the technical inspectors will visit the teams according to the scrutineering order. 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 the 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 (RuleIN1.3.6.).

## 08.2. SCRUTINEERING

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. 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 "ready-to-race" condition the inspection process will be stopped and the team must leave the scrutineering area (Rule IN1.3.6.).

If you do not finish the scrutineering for any reason you have to leave the scrutineering area and fix all problems.

Four team members maximum in the inspection box. For electric cars one of these four team members must be the ESO. For Driverless cars one of these four team members must be the ASR.

A laptop is required to check the documents uploaded to intranet (SES, IAD, ESF and ASF).

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

## ELECTRIC CARS: YOU MUST BRING

- Copies of FMEA
- A test piece of 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
- Milliohm meter
- 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

**COMBUSTION CARS: YOU MUST BRING**

- A test piece of 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

**ADDITIONALLY, FOR DRIVERLESS**

- RES remote control
- Source code of EBS supervisor, either digital or hardcopy

**08.3. TILT TABLE TESTING****YOU MUST PASS BEFORE**

- Scrutineering (including pre-inspection)

**SAFETY GUIDELINES**

- Four team members maximum in the Tilt Test 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
- 
- 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 person in charge at the tilt table must sign an inspection form, which travels with the car.

**08.4. RAIN TESTING (ONLY FOR ELECTRIC VEHICLES)****YOU MUST PASS BEFORE**

- Scrutineering
- Tilting Table Test

**SAFETY GUIDELINES**

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

## 08.5. NOISE TEST

### YOU MUST PASS BEFORE

- Scrutineering
- Tilting Table 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.

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.

## 08.6. BRAKE TESTING

### YOU MUST PASS BEFORE

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

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-inspection.

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-inspection.

Please note that re-inspection may be required if a work is performed on the vehicle's 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.



# 09. STATIC EVENTS

## 09.1. BUSINESS PLAN PRESENTATION EVENT

<b>LOCATION</b>	Campus Motor Anoia
<b>SCHEDULE</b>	See Schedule on Pages 8 and 9

During the Business Plan Presentation event, competitors may present their business model to an imaginary group of potential investors or high executives from a big company.

The presentation should include all the aspects for the feasibility of the business model: such as marketing, manufacturing, logistics, design, etc. 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 manufacturers or investors. Furthermore, the business plan presentation will include the main financial statements, such as a Capex plan, R&D Investments, Profit & Loss Statements, Balance Sheet and Cash Flow projections.

In summary, competitors need to define the business model and convince to the tentative investors (Business Angels) that the business is profitable. The organisation recommends teams to be more than 5 minutes before their time slot, make sure the team members are well prepared and they bring all the necessary equipment for the event.

The business plan presentation event is divided in four main parts: Business Plan Executive Summary, Business Plan Pitch Video, Deep Dive Topic, and Presentation.

### **BUSINESS PLAN EXECUTIVE SUMMARY**

The Business Plan Executive Summary should contain a brief description of the team's business model and may content the relevant information to be presented during the presentation part. This document must not exceed one page. Teams are advised to include financial information in their executive summary, for instance Profit & Loss Statement, Balance Sheet, Cash Flow, R&D Expenses, Material Fixed Assets, among others.

### **BUSINESS PLAN PITCH VIDEO**

The Business Plan Pitch Video should be considered the first impression of the business idea and must contain the relevant investment figures. The objective is to convince the potential investors or partners that the team's presentation is worthy of their time. The Business Plan Pitch Video must not exceed a length of 30 seconds and must be in a common video format as specified in the FSS rules.

### **DEEP DIVE TOPIC**

Judges after receiving the Business Plan Executive Summary and the Business Plan Pitch Video will ask competitors to provide a specific deep dive topic. At FSS 2022 the proposed deep dive topic is as follows:

"Please analyse the impact of Ukraine war and the energy crisis in your business plan figures. What will be the effect in the sales, investments, and cost of the vehicle?"

### **PRESENTATION**

The Business Plan Presentation will be limited to a maximum of 25 minutes. The judges will stop any presentation exceeding that time. The Business Plan Presentation will follow this breakdown:

- General and team introduction – 5 minutes
- Business Plan Presentation – 15 minutes
- Deep Dive Topic – 5 minutes

Furthermore, judges will follow with a Q&A session, where teams will need to answer questions relating to the presentation. Judges will use at least 5 minutes for this Q&A session.

### **BUSINESS PLAN PRESENTATION FINALS**

Top teams from the full ranking will qualify to the Business Plan Finals.

Finalist teams will be notified by the FSS staff with sufficient notice if they need to take part in the Business Plan Presentation Finals.

## 09.2. ENGINEERING DESIGN EVENT

LOCATION	Paddock 2 building
SCHEDULE	See schedule on pages 8 and 9

### PROCEDURE FOR THE ENGINEERING DESIGN EVENT

During the Engineering Design Event, teams will have the opportunity to showcase their car design to a set of experienced judges. Most of the session is performed in a Q&A format where judges will be distributed among the following categories:

- Technical Management
- Aerodynamics and Cooling
- Vehicle Dynamics and Suspension
- Structural
- Powertrain
- Low Voltage Electronics and Software
- [DV Only] Overall Autonomous Systems Concept
- [DV Only] Sensors and Perception
- [DV Only] Localization and Mapping
- [DV Only] Planning and Control

The teams will have a 45-minute design slot including:

- A 5 min presentation of the main design goals along with one or multiple pictures of the car.
- A 40 min Q&A session. Teams can showcase their engineering documentation, test results, and/or sample parts. Please, ensure you have documents, slides, pictures, etc. ready to show to the judges with relevant information.

Each team is allowed up to 15 individual presenters.

The 45-minute time will only count from the start of your presentation.

The organisation recommends teams to be on their assigned time slot with sufficient advance time, to make sure the car is in race-ready condition and that all the team members are well prepared.

Covers or parts of the vehicle can be removed or disassembled during the design event for the team to show their design concepts.

[EV Only] Opening of accumulator containers is strictly prohibited. If a team desires to show the Judges a set of cell stacks the cells must be fully discharged and shortened. This process cannot be done on-site.

[EV Only] The Tractive System Master Switch (TSMS) must be switched off for the entire Design Event

### ENGINEERING DESIGN EVENT FINALS

Top teams from each vehicle class will qualify to the Engineering Design Final.

The design final is not public.

Finalist teams will be notified by the FSS staff with sufficient notice if they need to take part in the Engineering Design Finals.

## 09.3. COST & MANUFACTURING EVENT

<b>LOCATION</b>	Paddock 2 building
<b>SCHEDULE</b>	See schedule on pages 8 and 9

During the Cost & Manufacturing event, a discussion with the judges will take place, next to the team's vehicle. The discussion is split into two parts: the Bill of Material (BOM) Discussion and the Cost Understanding.

The organisation recommends teams to be on their assigned time slot with sufficient advance time, to make sure the car is in race-ready condition and that the members presenting the event are prepared with the required documentation ready for the judges.

For FSS 2022 a DBOM for the "Chassis and Body System" must be submitted.

For FSS 2022 a CBOM for the "Suspension System" must be submitted.

Other DBOM or CBOM detailed systems analysis will be considered if they have already been submitted to the competition.

### **BILL OF MATERIAL DISCUSSION**

Cost Report Documents (CRD) have been requested to teams and they must be brought either as a hard copy or digital version to the event discussion. The judges will determine if all parts and processes have been included in the Cost Report. This event is judged on the quality and accuracy of the document and judges will add penalties if errors are detected or if items are omitted.

### **COST UNDERSTANDING**

A discussion to evaluate the general cost and manufacturing knowledge of the team.

### **PROCEDURE FOR THE COST & MANUFACTURING EVENT**

The Cost & Manufacturing event will last for 30 minutes and it will follow this structure:

- A 5 min presentation of the car and the team
- A 20 min Q&A session to cover the Bill of Material Discussion and the Cost Understanding
- A 5 min Judges' deliberation.

Each team is allowed up to 4 individual presenters.

The 30 min time will only count from the start of your presentation.

### **COST & MANUFACTURING EVENT FINALS**

No cost finals will be performed at FSS 2022.

The final scoring will be determined based on the judges' discussion and criteria.

# 10. DYNAMIC EVENTS

## 10.1. GENERAL INFORMATION

### TEAM / DRIVER - BRIEFINGS

<b>LOCATION</b>	Paddock 2 building
<b>SCHEDULE</b>	See schedule on pages 8 and 9
<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.

Practice Areas, Welding Area, Engine Test, Charging Area and Fuel Station are also considered dynamic areas.

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.

## 10.2. EVENTS

### ACCELERATION

LOCATION	Official Track
SCHEDULE	See schedule on pages 8 and 9

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.

### SKID PAD

LOCATION	Paddock 1
SCHEDULE	See schedule on pages 8 and 9

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

### AUTOCROSS

LOCATION	Official Track
SCHEDULE	See schedule on pages 8 and 9

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	Parcmotor Fast Track
SCHEDULE	See schedule on pages 8 and 9

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	Parcmotor Fast Track
SCHEDULE	See schedule on pages 8 and 9

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 pages 8 and 9

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	Scrutineering pits
SCHEDULE	See schedule on pages 8 and 9

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.

# 11. 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

# 12. ADDITIONAL INFORMATION

## 12.1. GENERAL SERVICES

### PHARMACIES

Ramón Singla Barceló	Av. del Mestre Montaner, 24 - 08700 Igualada	Tel.: 938050479	Mon.-Fry. 08:30-20:00 & Sat. 09:00 -13:00
Farmàcia Tous	Av. de Balmes, 73 - 08700 Igualada	Tel.: 931033593	Mon.-Sat. 08:30-20:30
Farm. Esteve Igualada	Av. Països Catalans, 101 - 08700 Igualada	Tel.: 938037319	Mon.-Sat. 08:45-20:45
Farmàcia Les Escoles	C/ Santa Llúcia, 97 - 08788 Vilanova del Camí	Tel.: 938037319	Mon.-Fry. 09:00-14:00 & 17:00-21:00 Sat. 9:00-14:00

### SUPERMARKETS

Carrefour - Igualada	Av. Països Catalans, s/n - 08700 Igualada	Tel.: 695369533	Mon.-Sat. 09:30-22:00
Mercadona - Igualada	Av. De Catalunya, s/n - 08700 Igualada	Tel.: 938829400	Mon.-Sat. 09:00-21:30
Mercadona - Vilanova del Camí	Ctra. De la Pobla de Claramunt - 08788 Vilanova del Camí	Tel.: 938829400	Mon.-Sat. 09:00-21:30
Caprabo - Igualada	Avinguda del Doctor Pasteur, 10-14 - 08700 Igualada	Tel.: 932616060	Mon.-Sat. 09:00-21:00
LIDL - Igualada	Avinguda Països Catalans, 14-16 - 08700 Igualada	Tel.: 900958311	Mon.-Sat. 09:00-21:30
LIDL - Vilanova del Camí	Carretera C-244, s/n - 08711 Òdena	Tel.: 900958311	Mon.-Sat. 09:00-21:30
BonÀrea - Vilanova del Camí	C/ Rafael Casanovas, 18-20 - 08788 Vilanova del Camí	Tel.: 938060486	Mon.-Sat. 09:00-21:00 & Sun. 10:00-14:00

### TAKEAWAY

McDonald's - Igualada	Av. d'Andorra, 33 - 08700 Igualada	Tel.: 938066646	Mon.-Thrs. 11:00-23:30 & Fry.-Sat. 11:00-00:30
Burger King - Igualada	Av. del Mestre Montaner, 45 - 08700 Igualada	Tel.: 683400442	Mon.-Sun. 12:00-22:00
Frankfurt Maripaz - Igualada	Av. de Ntra. Sra. de la Pietat, 34 - 08700 Igualada	Tel.: 683400442	Mon.-Sun. 08:00-24:00

### COPY CENTER

Paperam	Av. Centenari d'Amadeu Vives, 2 Local 3 Edifici Bon Preu 08293 Collbató	Tel.: 937779700	Mon.-Fry. 09:00-14:00 & 17:00-20:30 Sat. & Sun. 09:00-14:00
Increatic	Carretera de Piera, 8 - 08292 Esparreguera	Tel.: 670295999	Mon.-Sat. 09:30-13:30 & 17:00-20:00 Sun. 10:00-13:30

### FUEL STATION

Estación de Servicio Repsol	Carrer d'Aristides Maillol, 12 - 08028 Barcelona	Tel.: 937710472	Mon.-Sun. 00:00-24:00
E.S. BonÀrea Òdena	Avinguda Madrid, 44- 08711 Òdena	Tel.: 900899089	Mon.-Sun. 00:00-24:00
Estación de Servicio Repsol	Av. d'Europa, 26. Pol. Ind. - 08700 Igualada	Tel.: 938055415	Mon.-Sat. 06:00-22:00 & Sun. 00:00-24:00

### DO IT YOURSELF

OPTIMUS - Vilanova del Camí	C/ Papa Joan XXIII, 14 bis baixos - 08788 Vilanova del Camí	Tel.: 938043319	Mon.-Sat. 08:00-14:00 & 15:00-21:00
Leroy Merlin - Manresa	Carrer d'Agustí Coll, 2-12 baixos - 08243 Manresa	Tel.: 938749470	Mon.-Sun. 09:30-22:00
BricoCentro - Abrera	Carrer Hostal del Pi, 2 - 08630 Abrera (Barcelona)	Tel.: 937704930	Mon.-Sat. 09:00-21:00



## TIRE SHOP

Pneumatics Bages - Òdena	Carrer Lleida, 59 - 08711 Òdena	Tel.: 633435913	Mon.-Fry. 09:00-19:00
Pneumàtics Miquel - Igualada	Carrer d'Alemanya, 2 - 08700 Igualada	Tel.: 938033512	Mon.-Fry. 08:30-13:30 & 15:30-19:30 Sat. 09:00-13:00
First Stop - Igualada	Carrer d'Itàlia, 9 - 08700 Igualada	Tel.: 938033840	Mon.-Fry. 09:00-13:00 & 15:00-19:00 Sat. 09:00-13:00

## MEDICAL CENTER

CAP Vilanova del Camí	Costa C-244 d'Igualada a Sitges, 85 08788 Vilanova del Camí	Tel.: 938063302	Mon.-Fry. 08:00-20:00
CAP Igualada Nord	Carrer de Bèlgica, 5 - 08700 Igualada	Tel.: 938075800	Mon.-Fry. 08:00-20:00
Hospital Universitari d'Igualada	Av. De Catalunya, 11 - 08700 Igualada	Tel.: 938075500	Mon.-Sun. 00:00-24:00

# 13. SPONSORS

## PLATINUM SPONSOR



One more year NISSAN will support FSS2022.

Since the first edition, the NISSAN Technical Center Europe in Spain ( NTCE-S) has collaborate with FSS.

FSS and NISSAN share common values. The Passion of driving innovation to electricification and to the autonomous driving (ADAS-driveless).

Do what others don't dare to do, is part of NISSAN DNA and it represents the fundamental values of the FSS competition, were more than 50 teams will bring their innovations to the track.

## SILVER SPONSOR



Employing a Model-Based Design approach to the automotive design process enables teams to design, test, validate and share their models within one environment. Using industry-standard tools such as MATLAB and Simulink help students tackle real engineering problems. For more information visit:

<https://www.mathworks.com/academia/student-competitions/formula-student-spain.html>

The team from MathWorks will be onsite Wednesday to Friday to help you develop your skills in Battery Modeling and Raceline Optimization, whilst also giving you the chance to learn more about our Automated Driving Toolbox and Simscape Templates. Whether you need help getting started or you want to take your current project to the next level, just stop by the MathWorks and ask our technical experts.

## SILVER SPONSOR

# 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.

## 13. SPONSORS

### COLLABORATOR



The Bosch Group is a leading global supplier of technology and services. It employs roughly 401,300 associates worldwide (as of December 31, 2021). According to preliminary figures, the company generated sales of 78.8 billion euros in 2021. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI). The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first. The basis for the future growth of the company is its innovative strength. Bosch employs around 76,100 people in research and development at 128 locations worldwide, of which around 38,000 are software engineers.

### COLLABORATOR



The Computer Vision Center is a non-profit institution founded in 1995 by the Government of Catalonia and the Autonomous University of Barcelona (UAB). With an outstanding team of more than 130 researchers and technicians, 2000 m2 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, transfer knowledge to companies and society, and train scientists and high-level professionals.

The CVC performs exciting and pioneering research, working on the main problems of society and the challenges proposed by the European Union: health (cancer diagnosis, well-being for the elderly, mental health), industry and environment (sustainable farming, recycling, optimization of resources and quality control), mobility (autonomous driving, traffic accident prevention, smart cities) and culture (cultural heritage exploitation, document analysis, experience-based technologies).

The CVC also benefits from the success and added value of its patents and the creation of 13 spin-off companies, as well as working with the best companies worldwide. It also carries out PhD research and thesis tutoring, supports the master's degree program in Computer Vision (coordinated by the UAB, UPC, UPF & UOC) and has a year-round schedule of seminars and other introductory and advanced courses in Computer Vision topics.

### COLLABORATOR



Gestamp is a multi-technology company present in 24 countries and a team of over 40,000 professionals made up of 90 different nationalities. They are the driving force of the company, which designs, develops and produces parts for over 900 models of the leading vehicle manufacturers, and enable Gestamp to be one of the top automotive component suppliers worldwide.

The Group's main objective is to develop products with an innovative design to produce lighter and safer vehicles, which offer lower energy consumption and a lower environmental impact, being a main player of the mobility of today and tomorrow: safer and cleaner for everyone.

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