

# EVENI HANDBOOK

# AUG 8<>12 2022

# F S E A S T A U G 8 < > 12



FURTHER DETAILS AT FSEAST.EU #FSEAST #FSEASTAUG8<>12

## **EMERGENCY INFORMATION**



## **MINOR INJURY**

## **MEDICAL CENTRE**

Please accompany the injured person to the medical centre. Emergency aid is provided there. The medical centre is available every day round the clock.



## **SEVERE INJURY**

**CONTACT SOMEONE WITH A TWO-WAY RADIO** Most of the officials and security have a two-way radio. Ask them to call the medical centre or an ambulance.

## CALL AN AMBULANCE YOURSELF

Call an ambulance yourself if someone is severely injured and requires urgent help. The emergency number for every landline and mobile phone is 112. (Also see information about emergency calls below.)

## **DURING DYNAMICS**

When the dynamic area is open, a special rescue team is on site. To contact them, ask someone with a two-way radio (official, security).



## HOSPITAL

## **MAIN HOSPITAL**

Pest Megyei Flór Ferenc Kórház Address: 2143 Kistarcsa, Semmelweis square 1. Phone: +36 28 507 600 Fax: +36 28 507 648 E-mail: flor@florhosp.hu Homepage: www.florhosp.hu (Also see directions on the next spread)



## **EMERGENCY NUMBERS**

If an emergency occurs outside the times of the competition, call 112. This number works with all landlines, as well as mobile phones or coin-operated telephones as international GSM-standard. It is always free of charge, but should be used only in case of emergencies.

## **OFFICIALS**

In case of an eme	rgency, please call or	ne of them, no matt	er what time it is.
Event Manager:	Tamás Csütörtöki	+36 30 370 0733	0-24h
Ticket Center:	Bernadett Ötvös	+36 30 657 6205	7-18h
Event Control:	Bernadett Ötvös	+36 30 657 6205	7-22h

Regular emergency number:	112	0-2-
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## **BEHAVIOUR IN CASE OF REGULAR FIRES** (FUEL, OIL, PAPER, WOOD, ETC.)

- Call for help (firefighters/ambulance) by either finding an official with a radio or calling 112.
- 2. Assist injured people to leave the area, provide first aid if you can. 3. Try to extinguish the fire, if this is possible without risking your own safety.
- If an electric consumer is on fire, first cut the power to it.
- Leave the area and instruct others to do so as well.
- 5. Wait for the firefighters/ambulance to arrive.
- 6. Firefighters keep the situation under control, ambulance and medical professionals provide medical treatment.



## **BEHAVIOUR IN CASE OF ACCUMULATOR FIRES**

- 1. Immediately leave the area in a radius of 5 meters and instruct others to do so as well. Assist injured people to leave the area. An overheated accumulator is extremely dangerous, so do not put yourself in danger by trying to put it out. 2. Provide first aid to the injured, if you can. See the section below on what to do
- in case of electric shock in any case, do NOT give the victim water or food.
- 3. Call for help by finding an official with a radio or by calling 112 yourself. Wait for the firefighters and ambulance to arrive, who will handle the situation.
- 4. Regular emergency number: 112 0-24h
- 5. Stay out of the way of fumes coming from the accumulator or the car; mind the wind direction.



## **BEHAVIOR IN CASE OF ELECTRIC SHOCK**

- 1. Call for medical help by finding an official with a radio or by calling 112 yourself, preferably in parallel to the steps below.
- 2. Push one of the emergency shutdown buttons and wait until the TSAL is switched off. Note that this can take up to 5 seconds, wait patiently. 3. Try to speak with the victim and ask him/her about his/her health.
- 4. Insulate yourself if you must move a victim away from a live contact wear dry gloves or cover your hands
- with multiple layers of cloth and cover potential contact paths with the car with the HV isolation blanket. Watch your footing to make sure that you do not slip or fall when trying to move the victim.
- 6. Do NOT give water or food to the victim.
- Give artificial respiration if the victim is not breathing. 8. Give CPR if the victim's heart has stopped (only if you are trained in CPR)
- or use an Automated External Defibrillator. 9. Cover burns with a sterile dressing. On the surface, electrical burns may not look serious,
- but the burn can be severe deeper in the tissue.
- The victim might undergo ventricular fibrillation several minutes after experiencing a shock.



**FS FAST 2021** 

5. Do not move the victim if there is a possibility of neck or spinal injuries, unless he/she is in immediate danger.

10. Keep the victim comfortable, warm and at rest, and monitor his/her breathing until the ambulance arrives.



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**UMNI CUP** 

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#	Pit#	Team name			University name				Coun	try	Drivetrain	Car number
1	9	AGH Racing			AGH University of	Science	and Teo	chnology	Polar	nd	DV	110
2	15	AMZ Racing			ETH Zürich				Switzer		EV+DV	EV 33 / DV 33
3	3	Aristotle Racing Team			Aristotle University				Gree		CV	14
4	4	Aristotle University Racing Team Ele	ectric & D	riverless	Aristotle University	,		(	Gree		DV	41
5	21 23	Arrabona Racing Team ARUS Andalucía Racing Team CV			Széchenyi István U University of Sevill	,			Hunga Spai	,	CV CV	79 218
7	23	ARUS Andalucía Racing Team EV			University of Sevill				Spai		EV	151
8	16	BME Formula Racing Team			Budapest Universit		hnolog	v and Economics	Hunga		EV+DV	EV 11 / DV 11
9	22	BME Motorsport			TU Budapest	ly of ice	1110105	y unu Economics	Hunga	,	CVH	82
10	35	Bodensee Racing Team			HTWG Konstanz				Germa	,	EV	143
11	25	Cerber Motorsport			Bialystok Universit	y of Tech	nnology	1	Polar	nd	CV	88
12	8	Chalmers Formula Student			Chalmers Universit	ty of Tec	hnolog	у	Swed	en	DV	75
13	25	CTU CarTech			Czech Technical Ur	niversity	in Prag	ue	Czech Re	public	CVH	233
14	10	CURE Mannheim e.V.			DHBW Mannheim				Germa		DV	101
15	14	Dynamis PRC			Politecnico di Mila				Italy		EV+DV	EV 90 / DV 90
16	13	e-gnition Hamburg EV			Technische Univer	sität Har	nburg		Germa	'	EV+DV	EV 78 / DV 78
17	5	E-Team Squadra Corse			University of Pisa				Italy		CV	243
18 19	6 13	E-Team Squadra Corse Driverless Ecurie Aix			University of Pisa RWTH Aachen				Italy Germa		DV DV	543 99
20	15	eForce Driverless			Czech Technical Ur	nivorcity			Czech Re	'	DV	467
20	2	eForce FEE Prague Formula			Czech Technical Ur	/	in Prag	116	Czech Re		EV	167
22	7	Elbflorace e.V. Formula Student Tea	m TU Dre	sden	TU Dresden	inversity		ac	Germa		DV	59
23	8	Elefant Racing e.V.			University Bayreut	h			Germa		DV	21
24	30	EPFL Racing Team			Ecole Polytechniqu		ale de l	ausanne	Switzer	, land	EV	127
25	9	FaSTTUBe Driverless			Technische Univer	sität Ber	lin		Germa	any	DV	313
26	34	Formula Electric Belgium			KU Leuven				Belgiu	ım	EV	23
27	36	Formula Student Team Weingarten	Electric		UAS Ravensburg-V	-	en		Germa		EV	60
28	3	FS Team Tallinn			Tallinn UT/ Tallinn				Eston		EV	124
29	4	FS Team Tallinn Driverless			Tallinn University of				Eston		DV	19
30	1	Global Formula Racing			Oregon State Univ			· · ·	United S		EV	72
31	2	Global Formula Racing e.V.			Oregon State Univ		DHRM	Ravensburg	United S		DV	67
32 33	31 27	GreenTeam Uni Stuttgart Electric High Speed Karlsruhe			University of Stutt UAS Karlsruhe	gart			Germa		EV	26
34	11	High-Octane Motorsports e.V.			Friedrich-Alexande	r-I Iniver	rsität		Germa Germa		DV	49
35	38	HorsePower Hannover e.V.			Leibniz Universität				Germa		EV	169
36	41	Infinity Racing			University of Appli			noten	Germa	'	EV	51
37	11	KA-RaceIng Driverless			Karlsruhe Institute				Germa		DV	22
38	24	KEFO Motorsport			John von Neuman				Hunga	,	CV	229
39	38	Lions Racing Team e. V.			Technische Univer	sität Bra	unschw	veig	Germa	any	EV	910
40	39	LiU Formula Student			Linköping Universi	ty			Swed	en	EV	39
41	10	Lund Formula Student			Lund University				Swed	en	DV	32
42		Mainfranken Racing e.V.			UAS Würzburg-Sch				Germa	any	EV	97
43		Metz Racing Team			Ecole Nationale d'	<u> </u>			Franc		CV	157
44	29	MoRe Modena Racing Combustion			Università di Mode	ena e Rej	ggio En	nilia	Italy		CV	237
45	35	Munichmotorsport e.V.			UAS Munich	11			Germa		EV	113
46	33	Prom Racing			National Technical		,	tnens	Gree		EV	225
47 48	34 6	PUT Motorsport PWR Racing Team			Poznan University Wroclaw Universit			d Tachnology	Polar Polar		EV DV	7
49	24	Race UP Combustion			Università degli Sti			a reennoiogy	Italy		CV	85
50	23	Race UP Electric			University of Padu		uovu		Italy		EV	185
51	31	Raceyard E			University of Appli		ces Kie		Germa		EV	253
52	40	Rennschmiede Pforzheim			UAS Pforzheim				Germa		EV	179
53	15	Rennstall Esslingen			UAS Esslingen				Germa	any	CVH	94
54	16	Rennteam Uni Stuttgart e.V.			University of Stutt				Germa	any	CV	29
55	14	Revolve NTNU			Norwegian Univer	sity of Sc	cience a	and Technology	Norw	ay	EV+DV	EV 63 / DV 63
56	32	Road Arrow			University Of Belgr	rade			Serbi		EV	35
57	42	Scuderia Mensa HS RheinMain Raci	ng e.V.		UaS RheinMain	1	_		Germa		EV	65
58	27	Scuderia Tor Vergata			Universita degli Stu			· ·	Italy		CV	227
59		Starkstrom Augsburg Driverless	ont Too -		University of Appli		ces Au	Renald	Germa		DV	469
60 61	37 26	Superior Engineering Formula Stude Tampere Formula Student	ent ream		University of Ljublj Tampere Universit		lipd Sci	ences	Slover Finlar		EV CVH	69 178
62	26	Team Bath Racing			University of Bath	, or whh	neu Jul	01003	United Kir		CVH	222
63		TU Brno Racing			Brno University of	Technol	ogv		Czech Re	•	EV	74
64		TU Darmstadt Racing Team e.V. (DV	)		TU Darmstadt		-01		Germa		DV	24
65		TU Graz Racing Team			TU Graz				Austr		EV	53
66	5	TUfast e.V driverless			Technical Universit	y Munic	:h		Germa		DV	31
67	29	UNI Maribor Grand Prix Engineering	5		University of Maril	,			Slover		CV	235
68	41	UniBo Motorsport Electric			Alma Mater Studio	orum- Ur	niversit	y of Bologna	Italy	/	EV	188
69	42	UoP Racing Team			University of Patra				Gree		EV	86
70		UPBracing Team			Paderborn Univers	,	-		Germa		EV	58
71	7	UPC ecoRacing			Universitat Politèc			,	Spai		DV	70
72	37	UPMRacing			UPM Universidad		ca de N	laarid	Spai		EV	15
73	28	UVigo Motorsport	V	Court	Universidade de V	-	D2 //	Team norma	Spai		CV	314
#	Pit#		Year	Country	DT	#	Pit#	Team name		Year	Country	DT
1	48	AGH Racing	2021	Poland	CV	8	45	High Octane Motorsport		2021	Germany	CV
2	46	ART	2015	Hungary	CV	9	45	KA_Racing		2016	Germany	CV
3	47 47	Bodensee Racing Team	2014	Germany	CV EV	10	46	KA_Racing		2021	Germany	EV
4	47	DHBW DHBW	2017 2018	Germany Germany	EV	11 12	47	Ravetech Raving Team Rennteam		2018 2016	Germany Germany	EV CV
6	47	DHBW	2018	Germany	EV	12	46	Rennteam		2016	Germany	CV
7		DHBW	2015	Germany	EV	14		TU GRAZ		2013	Austria	CV
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CAMPING AUTÓSMOZI CAMPING I 2146 MOGYORÓD, KEREKTÓ STR. 4.

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**#GPS** 47.587654 19.247102

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## FORMULA EAST STUDENT EAST #GPS 47.583578 47.583578 19.24146 19.24146

CALX INC

## HOSPITAL PEST COUNTY FLÓR FERENC HOSPITAL 2143 KISTARCSA, SEMMELWEIS SQ 1. +36 28 507 600 WWW.FLORHOSP.HU #GPS

PEST COUNTY FLÓR FERENC HOSPITAL

Leave the event site and turn left to Hungaroring street at the MOL fuel station. At the crossroad turn right, then continue to follow the road until you reach the next one, then turn left. This road will take you to Kistarcsa, keep ahead until Auchan Shopping Centre, where you should turn left and pass by the whole area by going straight ahead in the first two roundabouts. At the third roundabout take the third exit and after 150 metres turn right to Semmelweis square. The hospital is going to be on your left, take a left turn at the corner of the building to reach the main entrance.

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## DAY #0

## 7TH AUGUST // SUNDAY

• 10:00 - 12:00	Volunteer Registration @Camping
10:00 - 12:00	Alumni Cup Registration @Camping
• 12:00 - 18:00	Camping - Moving in
• 12:00 - 18:00	Team Registration @Camping
12:00 - 13:00	Alumni Cup Briefing @Camping
13:00 - 18:00	Alumni Cup Scrutineering @Camping
• 14:00 - 20:30	HV Accumulator Scrutineering @Camping
• 14:00 - 20:30	Safety Equipment Check @Camping
18:00 - 20:30	Alumni Cup - Moving into the Pits @Pits
• 21:00 - 22:00	Opening Ceremony @Camping

## DAY #4

## 11TH AUGUST // THURSDAY

- 06:45 07:30 Volunteer Breakfast @Catering • 07:00 - 21:00 Event Site open • 07:00 - 08:00 FS EAST Run @GP Track • 07:30 - 08:00 Event Staff Briefing @EC • 07:45 - 08:00 Scrutineer Briefing @Scrutineering Tent • 08:00 - 08:30 Track Marshal Briefing @Press Conference Room • 08:00 - 16:00 Ticket Center open • 08:00 - 20:00 Event Control open • 08:00 - 09:00 Team Briefing @Catering • 08:00 - 16:00 Static Scrutineering @Scrutineering Tent • 08:00 - 17:00 Dynamic Scrutineering @Dynamic Scrutineering Area • 08:00 - 18:00 Charging Area open • 08:30 - 09:00 Track Walk @Endurance Track • 08:30 - 17:00 Driver, Data logger, Transponder, ESO & ASO Registration @EC • 09:00 - 13:00 Endurance CV 09:00 - 14:15 Skidpad DV • 09:00 - 17:30 Acceleration DV • 09:00 - 12:00 Test Track CV, EV @Test Track #1 • 09:00 - 12:00 Test Track DV @Test Track #2 • 09:00 - 12:00 EBS Test DV • 09:00 - 12:00 Brake Test CV, EV, DV • 09:00 - 17:00 Score Sheet Review for Teams @Press Conference Room • 09:00 - 17:00 Team Photo @EC • 12:00 - 13:30 Lunch break @Catering • 13:00 - 18:00 EBS Test DV • 13:00 - 18:00 Brake Test CV, EV, DV • 13:00 - 18:00 Test Track CV, EV @Test Track #1 • 13:00 - 15:00 Endurance CV • 14:30 - 17:30 Autocross DV @Test Track #2 • 15:00 - 18:00 Alumni Cup Endurance • 16:00 - 18:00 Sciengineering Challenge Final - Gamax Laboratory Solutions @Catering
- 18:00 20:00 Panoramic Picture @GP Track • 20:00 - 21:30 Team Captain Meeting
- 21:00 21:00 Pits close
- 21:30 22:30 Award Ceremony Part I. @Camping

## THE SCHEDULE WORM HAS DUG ITS WAY! STATE DYING TECH VINT ALMIN CAMP PR CHECKOUT EACH DAY FROM 7<sup>TH</sup> TO 13<sup>TH</sup> OF AUGUST

## AY #'

## 8TH AUGUST // MONDAY

• 06:45 - 07:30	Volunteer Breakfast @Catering
• 07:00 - 21:00	Event Site open
07:00	Pits open
07:00 - 12:00	Moving in to the Pits
07:00 - 16:00	Ticket Center open
07:00 - 21:00	Event Control open
08:00 - 18:00	Driver, Data logger, Transponder,
	ESO & ASO Registration @EC
• 07:30 - 08:00	Event Staff BriefinG @EC
08:00 - 09:00	Team Briefing @Catering
• 08:00 - 08:30	Track Marshal Briefing @Press Conference Room
• 09:00 - 17:00	Cost and Manufacturing Event
	EV, DV @Team Pits
• 09:00 - 19:00	Engineering Design Event - DV @Team Pits
• 09:00 - 20:00	Business Plan Presentation Event
	@Millennium Tower
• 09:45 - 10:00	Scrutineer Briefing
• 10:00 - 20:00	Static Scrutineering @Scrutineering Tent
• 12:00 - 13:30	Lunch break @Catering
• 13:00 - 20:00	Dynamic Scrutineering @Dynamic Scrutineering Area
• 13:30 - 20:00	Welding & Tyre Change open
13:30 - 15:30	Alumni Test Track open
• 15:30 - 16:00	Alumni Cup Briefing @Press Conference Room
• 16:00 - 18:00	Full GP lap on Hungaroring
• 16:00 - 20:00	Rain Test @Dynamic Scrutineering Area
• 19:00 - 22:00	Ambassador Night @Camping
• 21:00	Pits Close

## AY #5

## 12ND AUGUST // FRIDAY

• 06:45 - 07:30	Volunteer Breakfast @Catering
07:00 - 20:00	Event Site open
07:00 - 08:00	FS EAST Run @GP Track
• 07:30 - 08:00	Event Staff Briefing @EC
08:00 - 14:00	Ticket Center open
08:00 - 18:00	Event Control open
08:00 - 09:00	Team Briefing @Catering
• 08:00 - 17:00	Charging Area open
• 08:00 - 08:30	Track Marshal Briefing @Press Conference Room
• 08:30 - 09:00	Track Walk @Endurance Track
• 08:30 - 12:00	DV Trackdrive
• 08:45 - 09:00	Scrutineer Briefing @Scrutineering Tent
• 09:00 - 13:00	Endurance EV
09:00 - 15:00	Alumni Cup Special Event
09:00 - 18:00	Data Logger & Transponder Collection
	@Event Control
• 12:00 - 13:30	Lunch break @Catering
• 13:00 - 15:30	Endurance EV
• 13:00 - 16:00	DV Trackdrive
• 18:00 - 20:00	Moving out from the Pits

## • 21:00 - 23:00 Award Ceremony Part II @Camping

## DAY #2

## **9TH AUGUST // TUESDAY**

• 06:45 - 07:30	Volunteer Breakfast @Catering
07:00 - 21:00	Event Site open
07:00 - 08:00	FS EAST Run @GP Track
07:00	Pits open
07:00 - 16:00	Ticket Center open
07:30 - 08:00	Event Staff Briefing @EC
07:45 - 08:00	Scrutineer Briefing @Scrutineering Tent
08:00 - 21:00	Event Control open
08:00 - 09:00	Team Briefing @Catering
<ul> <li>08:00 - 09:00</li> <li>08:00 - 20:00</li> </ul>	Static Scrutineering @Scrutineering Tent
<ul> <li>08:00 - 20:00</li> <li>08:00 - 20:00</li> </ul>	Dynamic Scrutineering @Dynamic Scrutineering Area
<ul> <li>08:00 - 20:00</li> <li>08:00 - 20:00</li> </ul>	Charging Area open
08:00 - 08:30	Track Marshal Briefing @Press Conference Room
08:30 - 10:00	Alumni Test Track
• 09:00 - 12:00	Brake Test CV, EV, DV
• 09:00 - 12:00 • 09:00 - 12:00	Test Track CV, EV
• 09:00 - 12:00	Cost and Manufacturing Event - CV @Team Pits
• 09:00 - 17:00	Engineering Design Event - EV @Team Pits
• 09:00 - 19:00	Engineering Design Event - CV @Team Pits
<ul> <li>09:00 - 19:00</li> <li>10:00 - 12:00</li> </ul>	Business Plan Presentation Event
10.00 - 12.00	- Feedback session @Press Conference Room
• 10:00 - 12:00	EBS Test DV
<ul> <li>10:00 - 12:00</li> <li>10:00 - 18:00</li> </ul>	Driver, Data logger, Transponder,
• 10.00 - 18.00	ESO & ASO Registration @EC
10:00 - 12:00	Alumni Acceleration
<ul> <li>10:00 - 12:00</li> <li>10:00 - 12:00</li> </ul>	Alumni Skidpad
<ul> <li>10:00 - 12:00</li> <li>12:00 - 13:30</li> </ul>	Lunch break @Catering
<ul> <li>12:00 - 13:30</li> <li>13:00 - 18:00</li> </ul>	Test Track CV, EV @Test Track #1
<ul> <li>13:00 - 18:00</li> <li>13:00 - 18:00</li> </ul>	Test track DV @Test Track #2
<ul> <li>13:00 - 18:00</li> <li>13:00 - 18:00</li> </ul>	Skidpad CV, EV,
<ul> <li>13:00 - 18:00</li> <li>13:00 - 18:00</li> </ul>	Acceleration CV, EV
<ul> <li>13:00 - 18:00</li> <li>13:00 - 18:00</li> </ul>	Brake Test CV, EV, DV
<ul> <li>13:00 - 18:00</li> <li>13:00 - 18:00</li> </ul>	EBS Test DV
<ul> <li>13:00 - 18:00</li> <li>16:00 - 20:00</li> </ul>	Autonomous System Scrutineering @Scrutineering Tent
<ul> <li>10:00 - 20:00</li> <li>18:00 - 20:00</li> </ul>	Business Plan Presentation Event Final @Catering
<ul> <li>18:00 - 20:00</li> <li>19:00 - 21:00</li> </ul>	Engineering Design Event Final - DV @Start/Finish
<ul><li>19:00 - 21:00</li><li>21:00</li></ul>	Pits Close
<ul><li>21:00</li><li>21:30 -</li></ul>	Volunteer Night @Camping
- 21.30 -	

13TH AUGUST // SATURDAY

DAY #6

• 07:00 - 12:00 Camping - Moving out @Camping

























## FORMULA EAST STUDENT

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- 06:45 07:30 Volunteer Breakfast @Catering
- 07:00 21:00 Event Site open
- 07:00 Pits open
- 07:00 12:00 Moving in to the Pits
- 07:00 16:00 Ticket Center open
- 07:00 21:00 Event Control open
- 08:00 18:00 Driver, Data logger, Transponder, ESO & ASO Registration @EC
- 07:30 08:00 Event Staff Briefing @EC
- 08:00 09:00 Team Briefing @Catering
- 08:00 08:30 Track Marshal Briefing @Press Conference Room
- 09:00 17:00 Cost and Manufacturing Event
- EV, DV @Team Pits
- 09:00 19:00 Engineering Design Event DV @Team Pits
   09:00 20:00 Business Plan Presentation Event
- @Millennium Tower
- 09:45 10:00 Scrutineer Briefing
- 10:00 20:00 Static Scrutineering @Scrutineering Tent
- 12:00 13:30 Lunch break @Catering

## **MAP LEGEND**

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1	ENTRANCE / TICKET CENTER	۲	ARRIV
2	EVENT CONTROL	0	PATH T
3	CATERING	0	FENCE
4	TEAM PITS	$\bigcirc$	ON TH
5	FIRST AID / RESCUE	Ш	WAITIN
6	TOILETS IN THE BUILDING	0	WATER
7	WELDING	P	PARKII
8	CHARGING / SCRUT		TYRE
9	FUELSTATION		
10	STATIC & MEDIA CENTER		
	STATIC & MEDIA CENTER		

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# DAY #1

# 8TH OF AUGUST MONDAY // AFTERNOON



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• 07:00 - 21:00 Event Site open • 07:00 - 16:00 Ticket Center open • 07:00 - 21:00 Event Control open • 08:00 - 18:00 Driver, Data logger, Transponder, ESO & ASO Registration @EC • 09:00 - 17:00 Cost and Manufacturing Event EV, DV @Team Pits • 09:00 - 19:00 Engineering Design Event - DV @Team Pits • 09:00 - 20:00 Business Plan Presentation Event @Millennium Tower Static Scrutineering @Scrutineering Tent • 10:00 - 20:00 • 12:00 - 13:30 Lunch break @Catering • 13:00 - 20:00 Dynamic Scrutineering @Dynamic Scrutineering Area • 13:30 - 20:00 Welding & Tyre Change open • 13:30 - 20:00 Charging Area Open 13:30 - 15:30 Alumni Test Track open • 15:30 - 16:00 Alumni Cup Briefing @Press Conference Room • 16:00 - 18:00 Full GP lap on Hungaroring • 16:00 - 20:00 Rain Test @Dynamic Scrutineering Area • 19:00 - 22:00 Ambassador Night @Camping 21:00 Pits Close

## **MAP LEGEND**

:20

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(4)

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4 🛞 6

**1** ENTRANCE / TICKET CENTER 12 RAIN TEST 13 BRAKE TEST 2 EVENT CONTROL 3 CATERING (14) 4 TEAM PITS (15) 5 FIRST AID / RESCUE **TOILETS IN THE BUILDING** (6)  $\overline{7}$ WELDING 8 CHARGING / SCRUT 9 FUELSTATION 10 STATIC & MEDIA CENTER 11) ENGINE TEST AREA



- NOISE, TILT & WEIGHT **ALUMNI TEST TRACK**
- ARRIVING TO EVENT **PATH TO TRACK FENCE** ON THE ROOF WAITING SPOT WATER WALL GATES P PARKING TYRE CHANGE

# HEREISTHEWHERE



# 9TH OF AUGUST TUESDAY // MORNING



## DAILY SCHEDULE EVENT STATE OVINC TECH VANTR ALM

13

- 06:45 07:30 Volunteer Breakfast @Catering
- 07:00 21:00 Event Site open

(12)

- 07:00 08:00 FS EAST Run @GP Track
- 07:00 Pits open
- 07:00 16:00 Ticket Center open
- 07:30 08:00 Event Staff Briefing @EC
- 07:45 08:00 Scrutineer Briefing @Scrutineering Tent
- 08:00 21:00 Event Control open
- 08:00 09:00 Team Briefing @Catering
- 08:00 20:00 Static Scrutineering @Scrutineering Tent
- 08:00 20:00 Dynamic Scrutineering @Dynamic Scrutineering Area
- 08:00 20:00 Charging Area open
- 08:00 08:30 Track Marshal Briefing @Press Conference Room
- 08:30 10:00 Alumni Test Track • 09:00 - 12:00 Brake Test CV, EV, DV
- 09:00 12:00 Test Track CV, EV
- 09:00 17:00 Cost and Manufacturing Event CV @Team Pits
- 09:00 19:00 Engineering Design Event EV @Team Pits
- 09:00 19:00 Engineering Design Event CV @Team Pits
- 10:00 12:00 Business Plan Presentation Event
- Feedback session @Press Conference Room • 10:00 - 12:00 EBS Test DV
- 10:00 18:00 Driver, Data logger, Transponder,
- ESO & ASO Registration @EC
- 10:00 12:00 Alumni Acceleration
- 10:00 12:00 Alumni Skidpad
- 12:00 13:30 Lunch break @Catering

## **MAP LEGEND**

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16 WARM UP

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12 RAIN TEST **1** ENTRANCE / TICKET CENTER 13 BRAKE TEST 2 EVENT CONTROL 3 CATERING NOISE, TILT & WEIGHT (14) 4 TEAM PITS (15) **EBS TEST** (16) ACCELERATION 5 FIRST AID / RESCUE (17) TEST TRACK #1 (6) **TOILETS IN THE BUILDING**  $\overline{7}$ WELDING (18) TEST TRACK #2 8 CHARGING / SCRUT 19 ALUMNI TEST TRACK 9 FUELSTATION 10 STATIC & MEDIA CENTER 11) ENGINE TEST AREA



- ARRIVING TO EVENT **PATH TO TRACK FENCE ON THE ROOF** WAITING SPOT WATER WALL GATES P PARKING

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# 9TH OF AUGUST TUESDAY // AFTERNOON



07:00 - 21:00	Event Site open
07:00 - 16:00	Ticket Center open
08:00 - 21:00	Event Control open
• 08:00 - 20:00	Static Scrutineering @Scrutineering Tent
• 08:00 - 20:00	Dynamic Scrutineering @Dynamic Scrutineering Area
• 08:00 - 20:00	Charging Area open
• 09:00 - 17:00	Cost and Manufacturing Event - CV @Team Pits
• 09:00 - 19:00	Engineering Design Event - EV @Team Pits
• 09:00 - 19:00	Engineering Design Event - CV @Team Pits
• 10:00 - 12:00	Business Plan Presentation Event
	<ul> <li>Feedback session @Press Conference Room</li> </ul>
• 10:00 - 18:00	Driver, Data logger, Transponder,
	ESO & ASO Registration @EC
• 12:00 - 13:30	Lunch break @Catering
• 13:00 - 18:00	Test Track CV, EV @Test Track #1
• 13:00 - 18:00	Test track DV @Test Track #2
• 13:00 - 18:00	Skidpad CV, EV,
• 13:00 - 18:00	Acceleration CV, EV
• 13:00 - 18:00	Brake Test CV, EV, DV
• 13:00 - 18:00	EBS Test DV
• 16:00 - 20:00	Autonomous System Scrutineering @Scrutineering Tent
• 18:00 - 20:00	Business Plan Presentation Event Final @Catering
• 19:00 - 21:00	Engineering Design Event Final - DV @Start/Finish
21:00	Pits Close
• 21:30 -	Volunteer Night @Camping

DAILY SCHEDULE EVER STATE OVICE TEER VANTE ALMAN

## **MAP LEGEND**

1	ENTRANCE / TICKET CENTER	12	RAIN TE
2	EVENT CONTROL	13	BRAKE
3	CATERING	14	NOISE, 1
4	TEAM PITS	15	EBS TES
5	FIRST AID / RESCUE	16	ACCELE
6	TOILETS IN THE BUILDING	17	TEST TR
7	WELDING	18	TEST TR
8	CHARGING / SCRUT	19	STATIC I
9	FUELSTATION	20	ALUMNI
10	STATIC & MEDIA CENTER	21	SKIDPAI
(11)	ENGINE TEST AREA		
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ARRIVING TO EVENT ST **PATH TO TRACK IEST FENCE ILT & WEIGHT** 🔅 ON THE ROOF WAITING SPOT RATION WATER WALL GATES ACK #1 ACK #2 TYRE CHANGE INALS **TEST TRACK** 

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# DAY #3

**10TH OF AUGUST** WEDNESDAY HUNGARORING



• 06:45 - 07:30 Volunteer Breakfast @Catering • 07:00 - 21:00 Event Site open • 07:00 - 08:00 FS EAST Run @GP Track 07:00 Pits open • 07:30 - 08:00 Event Staff Briefing @EC • 07:45 - 08:00 Scrutineer Briefing @Scrutineering Tent • 08:00 - 08:30 Track Marshal Briefing @Press Conference Room • 08:00 - 16:00 Ticket Center open • 08:00 - 20:00 Event Control open • 08:00 - 09:00 Team Briefing @Catering • 08:00 - 20:00 Static Scrutineering @Scrutineering Tent • 08:00 - 20:00 Dynamic Scrutineering @Dynamic Scrutineering Area • 08:00 - 20:00 Charging Area open • 08:30 - 17:00 Driver, Data logger, Transponder, ESO & ASO Registration @EC • 09:00 - 12:00 Skidpad CV, EV • 09:00 - 12:00 Acceleration CV, EV • 09:00 - 12:00 Brake Test CV, EV, DV • 09:00 - 12:00 EBS Test DV • 09:00 - 12:00 Test Track CV, EV @Test Track #1 • 09:00 - 12:00 Test Track DV @Test Track #2 • 09:30 - 10:00 Alumni Cup Track Walk @Autocross Track • 10:00 - 12:00 Alumni Cup Autocross • 11:00 - 12:00 Press Conference @Press Conference Room • 12:00 - 12:30 Track Walk @Autocross Track • 12:00 - 13:30 Lunch break @Catering • 13:00 - 18:00 Autocross CV, EV • 13:00 - 18:00 Skidpad CV, EV • 13:00 - 18:00 Acceleration CV, EV • 13:00 - 18:00 Brake Test CV, EV, DV • 13:00 - 18:00 Test Track CV, EV @Test Track #1 • 13:00 - 18:00 Test Track DV @Test Track #2 • 13:00 - 18:00 EBS Test DV • 18:00 - 19:00 Cost and Manufacturing Event Final @Start/Finish • 19:00 - 21:00 Engineering Design Event CV Final @Start/Finish • 19:00 - 21:00 Engineering Design Event EV Final @Start/Finish • 21:00 Pits close

Movie Night @Camping

• 21:30

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## MAP LEGEND

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16 WARM UP

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1 ENTRANCE / TICKET CENTER	12 RAIN TE
2 EVENT CONTROL	BRAKE
3 CATERING	14 NOISE,
TEAM PITS	(15) EBS TES
5 FIRST AID / RESCUE	16 ACCELE
6 TOILETS IN THE BUILDING	TEST TR
<b>WELDING</b>	18 TEST TR
8 CHARGING / SCRUT	19 STATIC
9 FUELSTATION	
10 STATIC & MEDIA CENTER	21 ALUMN
1) ENGINE TEST AREA	22 SKIDPA
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0	PATH TO TRACK
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	ON THE ROOF
Π	WAITING SPOT
0	WATER WALL GATES
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# **11TH OF AUGUST** THURSDAY // MORNING



## DAILY SCHEDULE EVENT STATE OVINC TECH VANTR ALM

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- 06:45 07:30 Volunteer Breakfast @Catering
- 07:00 21:00 Event Site open

DRIVER CHANGE

• 07:00 - 08:00 FS EAST Run @GP Track

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- 07:30 08:00 Event Staff Briefing @EC
- 07:45 08:00 Scrutineer Briefing @Scrutineering Tent
- 08:00 08:30 Track Marshal Briefing @Press Conference Room
- 08:00 16:00 Ticket Center open
- 08:00 20:00 Event Control open
- 08:00 09:00 Team Briefing @Catering
- 08:00 16:00 Static Scrutineering @Scrutineering Tent
- 08:00 17:00 Dynamic Scrutineering @Dynamic Scrutineering Area
- 08:00 18:00 Charging Area open
- 08:30 09:00 Track Walk @Endurance Track
- 08:30 17:00 Driver, Data logger, Transponder, ESO & ASO Registration @EC
- 09:00 13:00 Endurance CV
- 09:00 14:15 Skidpad DV
- 09:00 17:30 Acceleration DV
- 09:00 12:00 Test Track CV, EV @Test Track #1
- 09:00 12:00 Test Track DV @Test Track #2
- 09:00 12:00 EBS Test DV
- 09:00 12:00 Brake Test CV, EV, DV
- 09:00 17:00 Score Sheet Review for Teams @Press Conference Room
- 09:00 17:00 Team Photo @EC
- 12:00 13:30 Lunch break @Catering

## **MAP LEGEND**

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12 RAIN TEST **1** ENTRANCE / TICKET CENTER ARRIVING TO EVENT **13** BRAKE TEST 2 EVENT CONTROL **PATH TO TRACK** 3 CATERING 14 NOISE, TILT & WEIGHT **FENCE** 4 TEAM PITS (15) **EBS TEST** ON THE ROOF **16** ALUMNI TEST TRACK 5 FIRST AID / RESCUE WAITING SPOT (17) TEST TRACK #1 (6) **TOILETS IN THE BUILDING** WATER WALL GATES  $\overline{7}$ 18 TEST TRACK #2 WELDING P PARKING TYRE CHANGE **19** STATIC FINALS 8 CHARGING / SCRUT **20) ENDURANCE TRACK** 9 FUELSTATION 21 DV ACCELERATION 10 STATIC & MEDIA CENTER 22 DV SKIDPAD **11)** ENGINE TEST AREA



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DAILY SCH	
• 07:00 - 21:00	Event Site open
08:00 - 16:00	Ticket Center open
08:00 - 20:00	Event Control open
• 08:00 - 16:00	Static Scrutineering @Scrutineering Tent
• 08:00 - 17:00	Dynamic Scrutineering @Dynamic Scrutineering Area
• 08:00 - 18:00	Charging Area open
08:30 - 17:00	Driver, Data logger, Transponder,
	ESO & ASO Registration @EC
• 09:00 - 14:15	Skidpad DV
• 09:00 - 17:30	Acceleration DV
• 09:00 - 17:00	Score Sheet Review for Teams @Press Conference Room
09:00 - 17:00	Team Photo @EC
• 12:00 - 13:30	Lunch break @Catering
• 13:00 - 18:00	EBS Test DV
• 13:00 - 18:00	Brake Test CV, EV, DV
<b>12.00</b> 19.00	Tost Track (1/EV/@Tost Track #1

13

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- 13:00 18:00 Test Track CV,EV @Test Track #1
- 13:00 15:00 Endurance CV
- 14:30 17:30 Autocross DV @Test Track #2
- 15:00 18:00 Alumni Cup Endurance

12

| | | | DRIVER CHANGE

- 16:00 18:00 Sciengineering Challenge Final Gamax Laboratory Solutions @Catering
- 18:00 20:00 Panoramic Picture @GP Track
- 20:00 21:30 Team Captain Meeting
- 021:00 Pits close
- 21:30 22:30 Award Ceremony Part I. @Camping

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MAPLEGEND		
1 ENTRANCE / TICKET CENTER	12 RAIN TEST	3 ALUMNI FUN
2 EVENT CONTROL	13 BRAKE TEST	💮 ARRIVING TO EVENT
3 CATERING	14 NOISE, TILT & WEIGHT	PATH TO TRACK
4 TEAM PITS	(5) EBS TEST	<b>FENCE</b>
5 FIRST AID / RESCUE	6 ALUMNI TEST TRACK	ON THE ROOF
6 TOILETS IN THE BUILDING	TEST TRACK #1	WAITING SPOT
7 WELDING	18 DV AUTOCROSS	WATER WALL GATES
8 CHARGING / SCRUT	19 STATIC FINALS	
9 FUELSTATION	20 AUTOCROSS	TYRE CHANGE
10 STATIC & MEDIA CENTER	21 DV ACCELERATION	
11 ENGINE TEST AREA	22 DV SKIDPAD	
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## **12TH OF AUGUST** FRIDAY



06:45 - 07:30 Volunteer Breakfast @Catering
07:00 - 20:00 Event Site open
07:00 - 08:00 FS EAST Run @GP Track
07:30 - 08:00 Event Staff Briefing @EC
08:00 - 14:00 Ticket Center open
08:00 - 18:00 Event Control open
08:00 - 09:00 Team Briefing @Catering
08:00 - 17:00 Charging Area open
08:00 - 08:30 Track Marshal Briefing @Press Conference Room

DAILY SCHEDULE EVENT STATE DYING TECH VINT ALM

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- 08:30 09:00 Track Walk @Endurance Track
- 08:30 12:00 DV Trackdrive

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| | | | DRIVER CHANGE

- 08:45 09:00 Scrutineer Briefing @Scrutineering Tent
- 09:00 13:00 Endurance EV
- 09:00 15:00 Alumni Cup Special Event
- 09:00 18:00 Data Logger & Transponder Collection @Event Control
- 12:00 13:30 Lunch break @Catering
- 13:00 15:30 Endurance EV
- 13:00 16:00 DV Trackdrive
- 18:00 20:00 Moving out from the Pits
- 21:00 23:00 Award Ceremony Part II @Camping

## **MAP LEGEND**

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1	ENTRANCE / TICKET CENTER	12	RAIN T
2	EVENT CONTROL	13	BRAKE
3	CATERING	14	NOISE,
4	TEAM PITS	15	EBS TE
5	FIRST AID / RESCUE	16	ALUM
6	TOILETS IN THE BUILDING	17	TEST T
7	WELDING & TYRE CHANGE	18	DV TR/
8	CHARGING / SCRUT	19	STATIC
9	FUELSTATION	20	ENDUR
10	STATIC & MEDIA CENTER	21	ALUM
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ARRIVING TO EVENT EST **PATH TO TRACK** TEST **TILT & WEIGHT** ON THE ROOF ST WAITING SPOT I TEST TRACK RACK #1 WATER WALL GATES P PARKING CKDRIVE TYRE CHANGE FINALS ANCE

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SUPERIOR ENGINEERING FS TEAM EV	LIONS RACING TEAM E.V. EV	UPBRACING TEAM EV	RENNSCHMIEDE PFORZHEIM EV	INFINITY RACING EV	JDERIA MENSA HS RHEINMAIN RACING E.V. EV	HIGH OCTANE MOTORSPORT ALUMNI	ALUMNI	BODENSEE RACING TEAM ALUMNI	AGH RACING ALUMNI
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## **ORGANISATIONAL ASPECTS**

ARRIVAL AND REGISTRATION FOR THE EVENT

**TEAM REGISTRATION AND CAMPSITE CHECK-IN** Sunday, 7th August (from 12:00 to 18:00) Schedule: Location: FS East Camp - Ticket Center

The first moment for the teams of Formula Student East is arriving at the FS East Camp on 7th August.

Team registration is handled based on a reservation system, which offers predetermined time slots for the teams that they can apply for. This enables a planned arrival and reduces the queue at the entrance. The time slots and details of the process are announced at fseast.eu/logistics-2022 prior to the event.

Our colleagues record your arrival, and give you any possible info about the next steps - registration, parking, moving into the campsite etc.

Only the Team Captain is allowed to register his/her team, however, the entire team must be present at the Team Registration. During the first step of the registration procedure Team Captains submit a printed version of the Standard Terms document signed by all team members which is available on the Rules & Important Documents page of the FS East website. By signing the Standard Terms the teams state that they accept the rules of the event, that only team members will work on the car, also understanding and following the safety guidelines of the event. Here will Team Captains get the starter package, which includes the passes, team car pass (which you have to fill out with all necessary information and stick on your car), an event handbook and a handy, after that the whole team can proceed to the following stage.

The next step of the registration is handing out the campsite wristbands of the team members. Campsite wristbands will be handed out based on the accommodation booking and on the Team Member Designation document.

If the registration procedure is over then the team is ready to move into the campsite with the help of our logistics team. Please note that the pits will be accessible only from the next day!

Useful contact: Nándor VARJU +36 31 784 2827

Team members who arrive later will be able to get their passes and wristbands separately at the Ticket Center of the event site at Hungaroring.

## **ARRIVAL TO THE EVENT SITE**

Schedule: Monday, 8th August (from 7:00 to 12:00) Location: Hungaroring - Main Gate

Teams are able to move into the pits from 7:00 AM on 8th August, which is coordinated by our logistics team based on the scrutineering order. With a valid pass and car pass, you can enter Hungaroring and our colleagues will guide you to your pit for unpacking. The Ticket Center will be open from 7:00 AM to handle the rest of the team registrations.

If you're not able to access the event site at once, the officials will show you the place to park your vehicle(s) and wait until you get the permission to enter.

## SAFETY REGULATIONS REGARDING ENTRANCE

Please pay high attention and DO NOT block any emergency exits of the event. Please follow our officials' instructions at all times. DO NOT park your truck at the gates until the officials order you to do so.

After finishing unpacking, all trucks and cars have to leave the main event area and be parked at the designated parking zones. Please note that for the upcoming event days, cars will be banned from the event site.

# **DISCLAIMER!**

WE WANT TO PROVIDE YOU WITH AN EXCELLENT EVENT EXPERIENCE AFTER SUCH A LONG HIATUS DURING THE 5 AND A HALF DAYS YOU SPEND AT FS EAST 2022. AS OUR TIME IS LIMITED AND SHORTER THAN EXPECTED, WE STRONGLY ADVISE YOU AND ASK FOR YOUR COOPERATION IN ADHERING TO THE SCHEDULE - ESPECIALLY ON THE EXACT TIMES OF MOVING OUT **OF THE PITS AS WELL AS FINISHING DYNAMIC DISCIPLINES!** 

NO CAR WILL BE ALLOWED TO START THEIR RUN AFTER 17:55! WE ASK FOR YOUR COOPERATION TO PROVIDE THE FAIREST AND SMOOTHEST EVENT EXPERIENCE FOR YOU AND OTHERS AS WELL.

TO EASE SCRUTINEERING, TWO SCRUTINEERING STEPS WILL BE **AVAILABLE IN THE CAMPSITE ON THE 7TH OF AUGUST (SUNDAY):** ACCUMULATOR SCRUTINEERING

■ SAFETY EQUIPMENT CHECK

## PLEASE PREPARE ACCORDINGLY AND CONSIDER THIS WHEN PACKING YOUR EQUIPMENT!

## **DRIVER REGISTRATION**

Schedule: Sunday, 7th August from 12:00 Location: FS East Camp - Event Control

Each team has to register at least 4 drivers. The drivers have to be registered at the Team Registration at the FS East Camp where they have to show their valid driver's license.

Late registrations will be handled from 8th August at the Event Control.

### ESO REGISTRATION

Schedule: Location:

Sunday, 7th August from 12:00 FS East Camp - Event Control

All EV teams and DV teams have to register dedicated members with thorough knowledge about the vehicle's electrical systems: at least one Electrical Safety Officer person (ESO), and at most 4 more team members who can enter

the charging area (altogether maximum 5 people). The ESOs have to sign the registration document at the Team Registration

The ESOs have to be nominated in advance on login.fseast.eu. Late registration will be handled from 8th August at the Event Control.

## **ASR REGISTRATION**

Schedule: Location:

Sunday, 7th August from 12:00 FS East Camp - Event Control

Autonomous teams have to register dedicated members with thorough knowledge about the vehicle's autonomous systems: at least one Autonomous Systems Responsible person (ASR), and at most 5 more team members who have to be present whenever the autonomous systems are operated (altogether maximum 5 people). The ASRs have to sign the registration document at the Team Registration

The ASRs have to be nominated in advance on login.fseast.eu. Late registration will be handled from 8th August at the Event Control.









## **PARKING AND VEHICLE PASSES FOR THE EVENT**

All teams have to ask for a Car Pass at the Team Registration (or in case of late registration at the Ticket Center) upon arrival.

## **1. PARKING AT THE EVENT SITE**

You are able to leave your passenger cars, vans and trucks in the designated 'Car Park' areas out of the event site. We provide one Car Pass for each team, which allows them to stay at the Event Site for a maximum of 10 minutes. These stickers are handed out during Team Registration. You can only enter the event site with a valid car pass on your car. The car pass has 4 fields: team name, driver's name, cell phone number and licence plate number. Each cell has to be filled out during the Team Registration (or in case of late registration, at the Ticket Center) and must be stuck on the windscreen.

NOTE: The exit routes have to be unobstructed all the time, that is why we need to regulate the venue's traffic. Please follow our guides in any case - unloading your vehicles, leaving the venue, moving by car/truck at the venue.

The pits can be unpacked AFTER Endurance on 12th August. Teams who finish the competition can ask our colleagues for help for early unpacking, however the main time slot for moving out of the pits is on Friday, 12th August between 17:00 and 20:00.

## ALL PARKING AREAS SHOULD BE LEFT UNTIL 20:00 ON FRIDAY, **12TH OF AUGUST AT THE LATEST.**

Inside the event area walking speed is the limit for cars too, 5 km/h maximum!

## **TICKET CENTER**

Schedule: From 8th August, 7:00 to 12th August 14:00 Location: Event site entrance

Teams, guests and officials receive their passes for entering the venue at the Ticket Center.

## **EVENT CONTROL**

Schedule:	From 8th August, 7:00 to 12	th August 18:00
Location:	Event Site	

Event Control is the central contact point for teams and all issues concerning the event.

## Event Control provides:

- Information point for all competitors (concerning schedule, general questions etc.)
- Contact interface to the officials
- Registration of the drivers
- Registration of ESOs, ASRs and charging area staff
- Scrutineering slot booking
- Transponder handout point
- Data logger handout point
- Document submission point (printed copies)
- Lost and found
- Feedback





## **KNORR-BREMSE**

# THE BOSS





Krisztina HORICSÁNYI

EC | Business Plan

Presentation Event

Ádám PAULUSZ

EC | Dynamic Preparation

Team Leader

Resi



Péter LINDNER

Board | Technical Inspection





Tamás CSÜTÖRTÖKI Board | Event Manager

Board | Score Counting

## THE SPARKPLUG **OPERATIVE TEAM**





OT | Timekeeping & Dynamic Area Scoring Responsible



Róbert PUSZTAVÁMI OT | Fuel Station Responsible

OT | Dynamic Preparation Team







Responsible

László BÁNÓCZI OT | CV & Hybrid Technical Responsible





ET | SES & IAD



ET | Communications Coordinator & Speaker

To contact us before and after the event, please write us an e-mail to hello@fseast.eu

János KUN

At the venue, we will answer your questions directly.

The fastest and easiest way to communicate with us is on-site.

Dávid KISS

Board | Event Manager ||

President of AAME

Zsolt THAMÓ

EC | Autonomous

Technical Responsibl

Krisztián DÖMÖTÖR

EC | Static Events Support

Szabolcs GYÖRKÖS

ET | Controlling Responsible

**OFFICIALS** 



Alexander DUDÁS

Board | External Relations ||

Vice-President of AAME

János SZALAY

EC | Electrical Technical

Responsible

Zakariás ERŐSDI

EC | Mechanical Technical

Responsibble

ET | Graphic Design Responsible



Csilla RUSZTHI ET | Social Media & Team Communication



Simon FÜLÖP

ET | Partner Account

Manager

Szandra HOFER ET | Project Manager

Gergely LÉGRÁDI

Board | Dynamic

Krisztián BANA

EC | Cost & Manufacturing

Event Responsible

András HORVÁTH

EC | Endurance & Autocross

Leader

Bernadett ÖTVÖS

Board | Event Control Leader

THE BADASS

EXECUTIVE COMMITTEE

Tamás LÉNÁRT

EC | Engineering Design Event

Responsible

Dániel SALAMON

EC | Alumni Cup

THE A-RANGER

**EVENT TEAM** 

Nándor VARJU

ET | Logistics Leader



Nora PÁPAI ET | HR Responsible



ET | Event Coordinator













Bálint BAKOS OT | Data Logger Responsible























Zsófia VÖRÖS OT | Skid Pad . Event Leader



















Tamás BERKECZ



Zsófia BODÓ Board | Driverless, Rules





Imre KOVÁCS OT | Dynamic Scrutineering & Driver Change Area Leade



Bendegúz KOMORÓCZKI

Bendegúz SZIRMAI OT | Brake Test Responsible



Dávid SZEGLETES OT | Acceleration Event Leader





Bálint BRUNCSICS OT | IT Responsible



**Roland TARCSAI** OT | Static Events



Aleksandar ZIVANOVIC OT | BPPE Deputy Responsible

\//ITHOUT THEM



**Gergely MATIN** OT | Static Events SCRUTINEERS: ÁDÁM KRAKKAI, ALEXANDER MORHARD, ALEXANDROS SISKOS, ANNA HEGEDŰS, ATHANASIOS SALTAS, BÁLINT BAKOS, BENCE BAKOS, BENCE SOÓS, CHRISTIAN KEILIG, CHRISTIAN SCHAPPMANN, CHRISTOS MICHOS, CSABA BOROS, CSABA HOYER, DÁNIEL DEISSINGER, DANIEL HAGEL, DANIEL HOLZWARTH, DÁNIEL SZABÓ, DAVID FALSER, DAVID KAISER, DERZSI ANDRÁS, ESZTER MURA-MÉSZÁROS, FAIDON MICHAIL NOUSIS, FRANCESCO ROSETTI, GERGELY HUNYADY, GERGELY MEKOTA, GIUSEPPE FABIANO, HENDRIK KNISPEL, jan maier, jonas eberhard, jonas weingärtner, józsef lennert, kristjan kõuts, krunoslav klarić, LEIRE OLAETA, LIA BABUD, LORANT FENDALL BURIAN, LUKA MILEK, LUKAS BRANDL, MARTIN BÜTTNER, MARTIN MOLNAR, MARTIN TOTH, MÁRTON MARSCHALL, MÁTÉ KOBA, MÁTÉ MÁRK TÖRÖK, MÁTÉ VAJK LAJTER, MAX FRIEDEMANN, MAX HEIDBRINK, MAX TRUMM, MIRA PRENZEL, MORITZ SCHUELER, MOSTAFA ELZAMAR, NIKOLAS BIHR. NILS STUMBÖCK, NOAH KNABBEN, OLIVER WENDLAND, PASCAL DRESSLER, PHILIPP SCHÖFTNER, POOJITHA godi. Ricardo Ferreira. Róbert fördős. Sándor Alex Perjési. Shantan Khandar. Simon dillmann. sören Rollwage, szilárd Bodor, tamas horvath, tamás tóth-katona, tomasz Łodziński, zakariás erősdi, zdeněk houf, zoltán ábrahám **Volunteers:** aaron von werder, ádám csuha, adam PANULIN, ALEXANDRA GKENTZI, ALISA SALNIKOVA, AMELIE MARKULL, ANDRÁS GÁTI, ANDREAS DIKAS, ANDREAS WOLFSGRUBER, ANNA BEDICS-NÉMETH, BALÁZS MERVAY, BÁLINT BRUNCSICS, BÁLINT KISS, BÁLINT SZEGLET, BÁLINT BURJÁN, BARNABÁS BURJÁN, BENEDIKT SCHWEERS, BENEDIKT WEICHEL, BERNADETT BRUNCSICS, BIANKA BRIGITTA BORBÉLY, BJÖRN MERKEL, BOLDIZSÁR DÉNES, BOTOND SZABOLCS FÜREDI, BOTOND VASKI, CHRISTIAN DAPORTA, CHRISTIAN KOGLER, CHRISTIAN RÖSKE, CHRISTOPHER SCHÖNBERG, CSONGOR NÉMETH, DÁNIEL BURUZS, DANIEL HARTMANN, DÁNIEL KELEMEN, DÁNIEL PÁSZTOR, DARSHAN SUDARSHNAIAH SETTY, DOMINIKA VIDA, DÓRA Hovany. Dóra réka lászló. Dr. beke-lizák péter. Emma varga-sós. Enikő vers. Erik rózsa. Ernesto RICCIARDI, ESZTER GURBICZ, ESZTER NAGY, FABIAN FRIEBE, FANNI BELKOVICS, FANNI GABRIELLA LEHOCZKY, FANNI TAKÁCH, FANNI VIZSY, FELIX BEYER, FELIX RODACH, FLÓRA HEGEDÜS, FRANK WITTMANN, FRÉDÉRIC KAUFFMANN, GERGELY NÉMETH, GERGŐ ZELJENKA, GRÉTA FARKAS, IAN KIPKURUI TUIKONG, JANINA FRANZ, JASMIN WOJAHN, JÁZMIN SALAMON, JOHANNES BODNER, JOHANNES BUSCHMANN, JOHANNES LASSACHER, JONAS GARCES, JONAS RICHTER, JULIA KRAUS, JUSTIN WUNDERLICH, KATA HAJNALKA KOLLER, KEVIN BANEA, KINGA FILP, KÍRA HANNA VADON, KITTI FARKAS, KLAUDIA OLÁH, KOVÁCS BENEDEK, KRISZTIÁN KOVÁCS, LAURA RUIZ MARSAL, LÉVI TÓTH, Leyre Barcina, Lilla Lugosi, Lipták máté lipták, Lorenz Haas, Lorenz Krause, Luca Demming, Luise KOLB. LUKAS PFLÜGER. LUKAS SAUSENG. MAJA TASSY. MARC MÖCKL. MARCELL NAGY. MARIO GOLLER. MARIUS HAUSER. MÁRK KOKAS. MÁRK PAP. MARKO ALTEN. MARTA KUBALA, MARTIN KOCSIS. MÁTÉ MATUSKA, MÁTÉ SZABÓ, MAX ZWANGER, MAXIMILIAN KELM, MAXIMILIAN LUTZ, MAXIMILIAN RÜDINGER, MICHAEL SIEKIERA, MIKE RABANSER, MIKOLT KEREZSI, MILAN KAISER, NAPSUGAR HUNYADI, NATALIE MAMMEL, NICOLE BALZ, NILS DEDNER, NIMROD LUDESCHER, NOAH SCHUH, OLIVER MARKUS, PÉTER HALÁSZ, PÉTER KADA, PÉTER KOVÁCS, PÉTER KOVÁCS, PÉTER PINCZÉS, PETER VINCZE, PÉTER ZSOLDOS, PETRINA POZSONYI, PHILIPP STOY, RÓBERT PALKOVITS, Roland Majerusz, Sabrina Schlupp, Saci Barla-Szabó, Sára Molnár, Sidney Wilke, Simon Frank, SIMON KARSCHNER, SOPHIE ADELFANG, STANISLAV CARACICOVSCHI, STEFAN OECHSLEIN, STEFAN RAMESEDER, STEPHAN PIROTH. STEVEN LAMINO. SVEN OEHRI. SVEN VIERLING. TAMARA DÖRRER. TANCRÈDE OSWALD. THERESA

KAISER, THOMAS SEEBACHER, TIM FRITZ, TOBIAS GOLM, VIKTÓRIA TÓTH, VINCE KÁLMÁN BARTÓK, VIRÁG BORÓKA SIMON, YANNIK DELANK, YANNIK LAUFER, ZALÁN GANECZ, ZSÓFIA TÓTH, ZSÓFIA VARGA, ZSOMBOR MEZEI JUDGES: ADAMCZIKO, ÁDÁMHORVÁTH, ADAMKISS-MIHALY, ÁDÁMSZABÓ, ADRIENNDR. BURUZS, AHMETMEHMET KARADENIZ, ÁKOS BOLYKY, AKOS TÖTTÖSI, ALEKSANDAR ZIVANOVIC, ALEXANDER MORHARD, AMJAD MATTARM, ANASTASIOS KOURTIS. ANDRÁS BALDAUF. ANDRÁS SZEKERES. ANDREAS WOLFSGRUBER. ANITA HORVATHsussmann, anita mekler, anna barbara ádám, anna mycek, anne beyer, áron sólyomvári, arpad HANDLER, ATTILA MAJOR, ATTILA WIDNER, BALÁZS FÜLÖP, BALAZS JOGG, BALÁZS MÉSZÁROS, BALAZS SZARVAS, BALINT PRAKTER. BÁLINT SÁRA, BALINT SZABO, BENCE DAVID GOCZAN, BENEDEK KOVACS, BENEDEK SZABO, BENEDIKT WEICHEL, BENJAMIN BRUNCSICS, BENJÁMIN ZSOLT BUZA, BOSCO LOPEZ, BOTOND MATHE, CHRISTIAN DAPORTA, CHRISTIAN FEHRING, CHRISTIAN KOGLER, CHRISTIAN LICHTENBERG, CHRISTIAN ROOS, CHRISTIAN RÖSKE, CHRISTOPH LUZEMANN. CHRISTOPHER SCHÖNBERG. CLAUDE ROUELLE. CSABA TARI. CSABA TUSSAI. CSILLA SZALAY. DANIEL ANDRAS NEMETH. DÁNIEL PÁSZTOR. DANIEL SALAMON. DANIEL SZAVICS. DANIEL SZTAHORA. DÁNIEL VASS. DAVID AKOPJAN, DAVID KAISER, DAVID RIVERO, DOMINIK KLEMENT, DOMINIK MAGERLE, ERNESTO RICCIARDI, ESZTER WASZLAVIK, EVELIN ILLÉS, FABIAN MALETZKE, FELIX BEYER, FELIX RODACH, FERENC TÓTH, FRANCESCO FABIO SEMERARO, FRÉDÉRIC KAUFFMANN, GABOR DAROCZI, GABOR JOO, GANESH KAKDE, GERGELY MATIN, GEORGINA GOCZA, GERGELY SIKI, GYÖRGY BOLLA, GYÖRGY BUDIK DR., HUNOR KEREKES, ILLÉS SALACZ, IMOLA BERKECZ, ISTVÁN DR. ERDŐDI. ISTVÁN TAMÁS MOLNÁR. JACOB CULLEY. JAN FURMANEK-KUZMENKOV. JÁNOS HALAS. JÁNOS KRISCH. JANOS MILANOVICH, JAVIER MARTÍN DELGADO, JOAO GINETE, JOHANNES BODNER, JONAS PANGERL, JONAS RICHTER, Jowett Padayao, Julia Kraus, Júlia Szilvássy, Julian Holzhäuser, Julian Preuss, Kaarel Haavajõe, KARL-DAVID LÄPPLE, KATALIN DR FESZTY, KEVIN LEBHERZ, KLEMEN PONGRAČIČ, KRISTJAN KÕUTS, KRISTOF NAGY, KRISZTIAN BANA, KRISZTIAN DOMOTOR, KRISZTINA HORICSANYI, LASZLO ALBERT, LÁSZLÓ DÁNIEL NÁDAS, LÁSZLÓ Kocsány, lászló szabó, leonhard hertenstein, lilla hollo, linda horvath, lorant fendall burian, LORENZ HAAS, MAHMOUD BISHR, MARC MÖCKL, MARCELL BALOGH, MARCO BUSCH, MAREK RYCHŁOWSKI, MARKUS NENZEL, MARTIN MOLNAR, MARTIN PLOOM, MÁRTON ZSIGA, MÁTÉ MATUSKA, MÁTÉ VARGA, MATĚJ ECLER, MATTHIAS GRELL, MAX ZWANGER, MAXIMILIAN RÜDINGER, MAXIMILIAN SPOERLE, MICHAEL BIENERT, MICHAEL BIRZER, MICHAEL SIEKIERA, MIRKO SCHULZE, MONIKA KALMAN, MUKUL BARDAY, NIELS MEINKE, NILS DEDNER, NILTON SILVA, NIMROD LUDESCHER, NINA WALLUSCH, NORBERT VARGA, OTTO BARABAS, OZAN KULCU, PAULA MUNOZ MONTANO, PETER JAKUBOVICS, PETER KAKAS, PETER NEMETH, PÉTER PIECZARKA, PÉTER TUGYI, PÉTER VÖRÖS, PHILIP MUHL, PHILIPP Kalanke, Piber Olivér, réka kustán, ricardo ferreira, richárd kléri, richard kozma, róbert orvai, Robin Herkert. Rodrigo melo donato de aguiar. Roko petrić, roland tarcsai, roni ampuja, sabrina SCHLUPP. SANDIPAN CHANDRA, SANDOR KLING, SIMON MÁTÉ KISS, SOPHIE ADELFANG, SÖREN KLAUSNITZER, SZILARD TORNYOS, TAMÁS BERKECZ, TAMÁS ILLÉS, TAMÁS KÁLLAI, TANMAY SHUKLA, THERESA KAISER, TIBOR POGÁNY, TIBOR SZUPPER. TIM FRITZ, TÍMEA LÁZÁR-FÜLEP, TIMEA PAIZS, TOBIAS GOLM, VICTOR POPA, VIKRAM RAMASAMY, VIKTOR BIHARI, VIKTÓRIA GŐDÉR, VIKTORIA VINCZE, YANNIK DELANK, YOSSEF YAKOUT, YUMENG LI, ZACHARIAS-PANAGIOTIS oikonomou, zdeněk houf, zoltán Ábrahám, zoltan dobos, zoltán dr. gyurkó, zoltan mongyi, zoltan SZLAVIK, ZOLTÁN TÉCZELY, ZSOFIA DR. BODO, ZSOLT FARKAS, ZSOLT SZABÓ, ZSOMBOR WEILING

## ANNOUNCEMENTS

The event will proceed according to the official time schedule as far as possible. Listen to the announcements and look out for the placards vat the event control for changes in the schedule.

## **PIT AND INFIELD TIMES**

The pits are open on all event days according to times determined in the Event Schedule. It is not allowed to stay or work in the pits any other periods. Teams who remove their vehicle (EV and IC) or tractive system accumulator from the competition site after the competition has begun will be disqualified from the competition.

## Violation of any of the above rules will result in a disqualification for the whole event.

## **PIT EQUIPMENT**

In every pit there are regular 230 V AC, 16 A power sockets. During the night the pits are guarded. You can see the pit arrangement on the team list and on the team flags on the pit entrances.

## SURVEILLANCE

After closing time, there will be a security company for surveillance of the event site, pits and cars. During the day, the teams are responsible for the security of their car and the equipment in their pit. Do not leave any valuables open in your pit at any time. Security is unable to monitor everything all the time.

## **TRANSPONDERS AND TIMEKEEPING**

## You get a transponder used for timekeeping at Event Control in charge for 50€ deposit.

You have to mount it on your car yourself. The transponder must not be removed until the competition ends, since it is vital for the timekeeping system.

At the end of the competition, please return the transponder to Event control, where you will get back your deposit. The exact time of transponder handout will be announced at the site.

Transceiving surface of the transponder must not be faced to the ground, but point to the left parallelly to the ground and perpendicularly to the centerline of the vehicle. The transceiving surface must not be obscured by any parts of the vehicle. Transponders will be provided by FS East Event. Transponders must be placed safely (securely attached, protected from debris and hot surfaces) on the left side of the vehicle (preferably on the nose cone, sidebox or diffuser) for timekeeping.

Only for EV and CV vehicles are required to use a transponder. Timekeeping for only DV vehicles does not require transponder. (EV-DV and CV-DV teams requires!)



If you are unsure of the position or orientation, or if a transponder comes loose or falls off, please contact a member of the timekeeping team at Event control.

Please note that the shown data is unofficial. No protests can be handed in based on the live-timing.

Please send a picture of your transponder mounting 3-4 pictures to almos.david.toth@fseast.eu until 11.08. 08:00. Email should contains your Car Number and your Teams PIT number.

## **JOIN US ON TELEGRAM TOO!**



T.ME/FSEAST2022

## **MANDATORY STICKERS ON CAR**

Teams have to put the organiser of the Event, Assossiation of Automotive Engineers logo on their car. Could be downloaded from fseast.eu/press-2022

## The sticker has to be:

- On both sides on the car
- On a Well visible vertical surface
- Edges has to be 100 mm long



## **ASSOCIATION OF AUTOMOTIVE ENGINEERS**

## OR YOU CAN USE THIS COPY ;) IT'S SIZE FITS THE RULE ABOVE







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## **RULES AND GUIDELINES**

Everyone (participants, volunteers, & visitors) at Formula Student East would like to enjoy an accident free event. The following guidelines have been established to advise teams of potential unsafe practices in the paddock and pit area.

## ALCOHOL

PLEASE NOTE: Alcohol at the event site is strictly forbidden!

Along with the fun, we want a safe competition. There will be alcohol testing (breathalyzers) during the event. 0 % is the allowable alcohol content during this event for everyone.

If ANY team member (driver or not), is tested with an alcohol level higher than 0.0 %, he or she will be immediately disqualified for the rest of the event. The second person of the same team caught with an alcohol level higher than 0.0 % will result in the entire team being disgualified immediately. For the Formula Student East Camp other rules apply for alcohol consumption.

## **FIRES AND SMOKING**

No open fires are allowed in the pit area and in the engine test area. This includes BBQ grills, oxy-acetylene torches, heaters, cigarettes, etc. Smoking is strictly prohibited in the dynamic area, in all buildings, and in the pit area. Smoking is permitted only in the dedicated area of the event site and outside the ticket center.

## JACKING

When jacking your car up off the ground a safe, stable, load rated support device must be used. The use of crates, piles of wood, or strong team members is NOT ALLOWED.

## **WORKING ON THE CAR**

- Angle grinders can ONLY be used in the dedicated welding area.
- In case of using angle grinders, safety glasses are required.

When using metal cutting equipment that produces metal chips, eye protection is required for the operator as well as any team member assisting. During the use of loud power tools like drills or angle grinders, ear protection is required. Any operation producing litter or debris, e.g. cutting of carbon fiber parts, should not be performed in the pits. Please take care about your environment by not littering.

WORKING ON THE TRACTIVE SYSTEM (EV AND E-DV) An ESO and at least one more team member who can interfere in case of emergency must attend every activity which involves the tractive system.

Opening any tractive system enclosure is only permitted if it is de-energized and disconnected from any high voltage source. If the enclosure is within the vehicle, the accumulator container needs to be removed from the vehicle. Opening the accumulator containers is only permitted in the charging area, not in the pits. Activation of the tractive system of the car in the pits is prohibited.

## The tractive system may only be activated in the dynamic and the scrutineering area for testing purposes under following conditions:

- Separate the car with a barrier tape, provided by FS East on request.
- The car must be jacked up and the driven wheels demounted.
- One team member must be prepared to push an emergency button at any time.
- Team members who take part in the measurement activities must wear compliant safety gloves and use appropriate measurement devices and tools.
- The tractive system must only be active when it is necessary.
- Only members of your team and Scrutineers are allowed to stay behind the barrier tape.

## After any activity on the tractive system during which seals were broken, an E-Scrutineering is mandatory.

If any of the above mentioned instructions is not obeyed, it may result in deduction of points, ESO role disownment or disgualification.

## CHARGING CONNECTOR AND MAX. POWER

Only 32 A three phase (5 pin) sockets will be available in the Charging Area. A limited number of adapter to 16 A single phase will be provided by FS East, but teams are strongly encouraged to bring their own adapter.

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## **ELECTRIC VEHICLE FIRES**

The organisers are aware of a number of incidents where prototype electric vehicles caught fire and were completely destroyed. In some cases fire extinguishers were used to control the fire, but they didn't have any effect. For this reason the organisers reserve the right to take any action in order to stop or control the fire. This can even include pouring lots and lots of water on the accumulator, which can have the effect of cooling the cells sufficiently to stop and control thermal runaway.

If a team wishes to choose a preferred method for the case their electric vehicle catches fire, they can do so by discussing it directly with the chief of electrical scrutineering (János Szalay) during the event by latest thursday 16:00. It is technically more difficult to handle electric vehicle fires in the pits, therefore the team must keep the possibility that the car can be easily pushed out of the pit. The HV accumulator must be observed for minimum one hour after it was charged.

Any fire or accident must be immediately reported to the organisers.

## **RUNNING ENGINES OR MOTORS**

You are allowed to run engines (IC) or put the car into ready-to-drive mode (EV) ONLY in the designated engine test area, after passing scrutineering.

## **!!** FS ENGINES MAY NOT BE RUN IN THE FS EAST CAMP **!!**

## **DATA LOGGERS**

The data loggers will be handed out at the Event Control during opening hours, in exchange for a 250 € deposit. You have to install the data logger in the car prior to EV2 scrutineering, according to the data logger instructions available on the FS East website. You can find any necessary information in the Data Logger Specification. You can ask our E-scrutineers for help with the installation.

The proper functioning of the data logger will be tested during the second part of EV2 scrutineering. An E-scrutineer will read out your data logger data via WIFI connection each time whenever your car leaves the dynamic area to check the power and voltage limit during your competitive runs.

The officials will check if the power consumption was higher than 80 kW, if the accumulator was higher than 600 V or lower than what your cell configuration allows in the ESF. According to FSG rules, each violations of any of the limits during any of the dynamic disciplines will result in a disgualification for the best run of that discipline. For example if too high power consumption was recorded at two separate acceleration runs, that means a DQ for the two best acceleration runs.

It is the responsibility of the team to ensure that the data logger data from each event is made available to the organizers. Failure to make the data available within one hour due to the team's fault will result in the team not being scored for the respective event.

After the data was read out after the endurance, the data logger has to be removed from the car and returned to the event control, where you get back your deposit. Please note that you must return the data logger and every components (cables, sensor) in exactly the same shape as you got it (no screws missing, no additional tape or velcro, no glue, etc.), otherwise the officials can decide to keep your deposit or a part of it. It is the team resposability to take pictures of the logger, sensor and cables when they are picked up from the Event Control otherwise the data logger instructions will be considered as the original condition.

We encourage all teams to record own efficiency data for the unlikely event of a data logger failure during the endurance event. Any attempt to manipulate the intended function of the data logger may lead to a disqualification from the entire event.

If you have any questions regarding the data logger, please ask for the data logger responsible at the Scrutineering area, or contact directly Péter Lindner (+36-30/655-3534)

## WELDING

Formula Student East provides an approved welder. Welding is allowed in the designated welding area only.

## **FIRE EXTINGUISHERS**

Your fire extinguishers are to be immediately accessible at all times. All team members must be familiar with their use. At least one fire extinguisher must accompany the car wherever it goes.

Fire extinguishers will be provided by Hungaroring and will be available for all teams at the event site.

## **VEHICLE MODIFICATIONS**

If you make any major modifications to your car, cars must return to scrutineering for re-approval.

## FLAGGING

All drivers must know the competition-flagging signals.

## BEHAVIOUR

Alcohol and drugs have no place at this event. Alcohol is only allowed at the campsite and at the farewell party.

### **VEHICLE TESTING**

Driving practice is only allowed within the designated test areas and at the designated times. There will be two test tracks provided for the CV and FV teams.

Please drive during testing with care! The side of the tracks are marked with cones, do not cross them!

On Test Track 1, Dynamic manouveres are only allowed to the direction of the Hungaroring racetrack, please drive slow in reverse direction.

On Test Track 2, Driverless Cars have the priority. There is a built-up track on test track 2, do not modify it!

## **HOW TO WHEEL THE CAR**

Whenever a car is moved, please take care of the following:

- There must be a driver wearing a full safety suit seated in the cockpit.
- The car must be moved with a push bar (which must have a fire extinguisher attached). Cars with wings are required to have two team members walking
- on either side of the vehicle whenever the vehicle is being pushed.
- For EV teams only.) In case the car has not passed all parts of E-Scrutineering, the HVD must be disconnected
- while the car is moved around on the event site, or while taking part in static events.

## SPECIAL NOTE FOR DRIVERS

All drivers should do a check of critical fasteners and components on their vehicles to assure complete control during the driving events. Fasteners come loose, parts break due to fatigue and occasionally someone forgets to torque a nut - this may have serious consequences for your safety!

**REMEMBER:** USE THE KILL SWITCH IN CASE OF AN ENGINE OR BRAKE MALFUNCTION! HAVE FUN - DRIVE SAFELY - USE COMMON SENSE!

# <HANDBOOK>

## Flags and communications

### BLACK FLAD

The driver must pull into the driver change area for di officials concerning an incident. A time penalty may b ally may be a

### BLACK FLAG WITH ORANGE DOT

-Bechanical black flag. The delver must pull lete the delver change area for a mechanical inspection of the vehicle, samething has been observe

### BLUE FLAG

The driver must pull into the designated passing zone to be passed by a faster competitor. The driver must shey the bash marshals signate at the and of the passing some.

### CHECKERED FLAG

The second has been completed. The driver must still the searce of the first spectantly.

GREEN FLAG (a) The session has started, the driver may enter the rearse under direction of the truck marshells. In case of statling, the vehicle can be resided, but the driver has to avail another green flag as the opening in truthfor may have closed. (b) The driver is clear to re-enter the track after soing the slow issue to let a faster

vehicle pass. (c) The driver may pick up speed again after a yellow flag was employed

### RED FLAG

The deliver must come in an immediate and and controlled shap on the course and must follow track marshals deections.

### TELLOW FLAG - WAVING

Danges, the driver must slaw down, something has happened beyond the fing station, no overtaking unloss directed by the track marshain.

### VELOW FLAG - STATIONARY

-Warning, there can be danger beyond the next flag station. The driver has to pay more attaction to the following flags.

### **RED AND YELLOW STRIPED FLAG**

The track is alignery or something is on the racing surface that should be there. The driver must be prepared for exactive manurums to avoid

### HITE FLAG

-There is a much clower car before the driver. The driver has to be press for slowing down with the unst overtaking room

The detachable key of the primary master switch (IC) or tractive system master switch (EV) must be taken off completely.





## **DYNAMIC EVENTS**

## **GENERAL INFORMATION**

The dynamics at FS East are compliant with the FSG Rules 2022 Part D and additional FS East 2022 Rules. The following pages describe the additional procedures and key aspects. Other information will be provided at the morning briefings on site.

## **TEAM AND DRIVER BRIEFINGS**

There are team briefings every morning of the competition at the Catering area at the designated time in the schedule, on Monday, Tuesday, Wednesday, Thursday and Friday. All drivers and team captains for that day must attend. The briefing contains general event information and detailed information about the dynamic events of the day.

Wristbands will be handed out to the participants of the morning briefings. Without these wristbands, attending the dynamic events is NOT POSSIBLE. Missing the briefing (or late arrival) means no entrance to the dynamic events.

## **ACCESS TO THE DYNAMIC AREA**

Every team will receive four rubber wristbands labeled "Dynamic pass". With these wristbands at most four team members may enter the dynamic area or the engine test area, including the driver and/or the ESO. Drivers may take them off for driving, but must put them back on afterwards. Cheating on handing out wristbands from the dynamic area is strictly forbidden and will be penalised!

The final appointment, when it is allowed to start a run in the dynamic area is 17:55 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

## WEATHER

This is one of the factors which can not be influenced by the event organisation. So please be aware that the timetable will not be changed due to bad weather conditions.

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. Please read the rules for more information.

## SEALS

Scrutineers will mark or seal various approved parts (e.g. tires, rims, insulation monitoring device, accumulator containers, data logger...). The car can be disqualified from any dynamic event by using unmarked parts. Parts with broken seals are equivalent to being unmarked. Broken seals can only be replaced by a scrutineer.

## **CAR SET-UP ALTERATIONS**

Teams do not have to use the same car set-up for all the dynamic events and are encouraged to make adjustments (e.g. tyre pressure and suspension settings) to give the vehicle characteristics best suited to each specific event. However, the car must comply with the rules, and all the seals from technical inspection must be intact.

## **TYRES**

FS East provides a tyre changing service. For details please look up the event map.

## **FUEL AND OIL**

Open fuel containers are not permitted at the event. All fuel containers must be DOT approved. Waste oil is to be taken to the fuel station for disposal. Refuelling is only allowed at the fuel station, but not in the pits.

### **ENGINE TEST AREA**

Location: see site plan

This is a designated area for test running the engines or motors. Entering this area is only allowed with the Dynamic wristbands.

## Your car must have passed scrutineering and you must follow these rules:

- The car must be in one of the designated engine test area slots.
- The car must be adequately supported, with the wheels at least 10.2 cm (4") off the ground.
- There must be a fire extinguisher immediately available.
- The gearbox must be in neutral or the driven wheels must be demounted.
- No one is allowed under the car while the engine is running.
- Re-fueling is only allowed in the designated fuel area, not in the engine test area.

## FUEL STATION (CV AND C-DV)

Location: see site plan

The fuel station will provide standard RON 100 fuel and MOL Racing Fuel DRX (specification can be found at fseast.eu) for teams. No other fuel or additives are permitted.

Be aware that no participant is allowed to bring fuel to the competition. FS East will provide all fuel for the competition at the fuelling station.

No vehicle will be provided with fuel until it has passed scrutineering.

Draining fuel and lubricants from the car is only permitted at the fuel station.

### Follow these safety guidelines while in the fuelling area:

- All engines must be turned off; cars are to be pushed to and from fuelling.
- Fuelling can only be possible for cooled down vehicles.
- The driver must not sit in the car during the fueling process.
- No mobile phones are allowed in the fuelling area.
- The tank is to be filled to the fuel level line before the tilt test and the endurance event.
- The first time the vehicle is fueled, the car must proceed (with the engine off) to the tilt table.

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While the engine is on, a driver must be seated in the cockpit, wearing a full safety suit and with the belts fastened.

Re-fueling must be possible without the removal of any body parts of the car (except the cap of the fuel tank).





## **TECHNICAL & SAFETY INSPECTION**

## SCRUTINEERING AND CHARGING AREA



## **GENERAL INFORMATION**

Opening of or working on the accumulator containers, including charging them, is only allowed in the charging and scrutineering area, during the opening hours.

- During charging, accumulators must be removed from the car and placed on the accumulator container hand cart. Only chargers marked after successful Accumulator Scrutineering must be used. Three phase 32 A sockets will be available in the charging and scrutineering area.
- An ESO must be present at all times during charging and whenever an accumulator container is open. Safety glasses and safety gloves must be used whenever an accumulator container is open and the maintenance plugs not removed. If the accumulator container is opened, it is cannot be leaved unattended without covered with HV blankets and marked with the ESO's name and telephone number.
- No more than four members and only team members of any electric team are allowed in the charging area at the same time. The organisers reserve the right to declare the charging area "full".
- The charging and the scrutineering area is located in the same place. When you are in the Scrutineering tent be very careful, do not disturb others and take extra care to keep your tools and things in proper order. If someone's behavior is unacceptable, he or she can be banned from the area, and the team also may be penalized.
- The charging area and the scrutineering are accessible from one way corridors. Do not block or disturb this passages, they are emergency routes as well.
- In case of fire, if someone presses the emergency horn, or if the Officials ask for it, leave the area immediately on the shortest way through the corridors.
- During the Scrutineering, teams may make small repairs on the car, but the time spent in one attempt can't exceed 15 minutes total. If the time expires, the team has to leave the area, and be placed on the end of the scrutineering order.
- The times in the event schedule are strict. We do not start scrutineering after the area closes. It is the team's responsibility to make sure the acceptance of each test is properly documented.

## SCRUTINEERING STEPS

Cars have to pass a technical and safety inspection before being allowed to practice or take part in the dynamic disciplines. The car has to be presented at each step of the inspection. Scrutineering steps with the same Roman number can be executed in any order, if all of the steps with the same Roman number are completed the team will be eligible for the next category. Driver Egress and Safety Test must be passed before the Brake Test.

EV CARS:	CV CARS:
Driver Egress and Safety Test	Driver Egress and Safety Test
I./A Mechanical Scrutineering	I./A Mechanical Scrutineering (extended for Hybrid cars)
I./B EV1 Scrutineering*	II. Autonomous Scrutineering (DV only)***
I./C HV Accumulator Scrutineering*	III/A. Tilt test
II. EV2 Scrutineering	III/B. Noise test (ETC & BSPD) included
II. Autonomous Scrutineering (DV only)**	III/C. Brake test
III/A. Tilt test	IV. Autonomous Brake test (DV only)
III/B. Rain test	
III/C. Brake test	
IV. Autonomous Brake test (DV only)	

\*EV1 and Accumulator Scrutineering can be exchanged or taken simultaneously. If the team uses the HV battery to generate the LV supply, the team has to start with Accumulator Scrutineering. \*\*For E-DV cars the EV2 and the Autonomous Scrutineering will take place at the same time. \*\*\*For C-DV the Autonomous Scrutineering will be held in the engine test area. Passing any of the above steps is marked with a sticker on the technical inspection sticker. Cars which have not finished scrutineering by the start of endurance/trackdrive will not be allowed to compete in the dynamic events.

## **SCRUTINEERING ORDER**

The scrutineering order (Mechanical, EV1, Accumulator) will be determined based on the Quiz results. Teams who have uploaded a VSV (that has been accepted later) before the initial deadline will get scrutineering prio. Non-DV teams will have scrutineering prio on Day 1 since the dynamic events for DV only starts on Day 4. The registration will take place online. The team captains will get an email with the date when the form will be available for them before the competition, so please check your emails regularly (even your spam folder). If a team misses their time to book a slot then they will lose their priority but can book their slot immediately.

Once a team completed all of their scrutineering steps to be eiligible for EV2 (EV only) or Autonomous (C-DV only) they can book their slot in the scrutineering tent at the offical zone. Registration for Re-Scrutineering Slots will also be available at the scrutineering tent if a team cannot pass all of the inspection points on the first try.

The order for Egress, Tilt, Rain, Noise, Brake and EBS will be first come first serve, but the officials keep the right to send back teams from the end of the queue to prevent too long lines. Teams who have not yet completed their first try will be given priority.

## **DRIVER EGRESS AND SAFETY TEST**

Location: Charging & Scrutineering area

During scrutineering maximum four team members can be in the pit. The driver egress test has to be done for all drivers before they are allowed to use the car in the dynamic area, but it can take place any time during the event. Ask for the egress test assistants at the Event control. Driver egress and checking of safety gears will be held at separated section.

Please begin scrutineering with the tallest driver in the car, belted, and prepared for roll bar height and egress check. Your other drivers might be checked as well upon request of the scrutineers.







### You must have the following items available:

- The car in finished condition
- Camera mounts installed on the car, if they are to be used at the event
- Ouick jack and push bar
- All driver suits and other safety gear: arm restraints, helmets, suits, gloves, eye protection, balaclavas, socks and shoes

After the successful scrutineering process the drivers who passed the egress will be marked in the online inspection sheet.

If pilots have failed the test, and you will have to try again.

## **MECHANICAL SCRUTINEERING**

Location: Charging & Scrutineering area Time limit: 90 minutes

Scrutineers will check if your car meets the rules. Your TS Accumulator (EV only) must not be in the car during mechanical scrutineering.

## You must have the following items available:

- The car in finished condition
- Camera mounts installed on the car, if they are to be used at the event
- Printed copy of the Structural Equivalency Spreadsheet
- Printed copy of the Impact Attenuator Data Report
- A test piece from the impact attenuator
- Teams with monocoque: Laminate test specimen
- All the tyres you plan to use at the event
- 2 fire extinguishers
- Quick jack and push bar
- For Hybrid vehiceles the HSC must also be presented here.

After the successful scrutineering process the team will be rewarded with the Mechanical scrutineering sticker and Hybrid sticker (if applicable).

If you have items that need to be rectified you will not get your sticker, and you will have to present your car for scrutineering again. The scrutineers reserve the right to spot check any car at any time during the event.

## **EV1 SCRUTINEERING (EV AND E-DV)**

Location:	Charging & Scrutineering area
Time limit:	60 minutes

Scrutineers will check that your car fulfills the EV rules without activating the tractive system.

## You must have the following items available:

- The vehicle with operable LV system (either with or without the tractive system battery)
- Documentation (either printed or electronic format)
- Firewall sample
- Every self developed PCB which are interfacing with the tractive system (spare PCBs)
- At least 2 but maximum 4 team members (one of them has to be ESO)

After the successful scrutineering process the team will be rewarded with the EV1 scrutineering sticker.

If you have items that need to be rectified you will not get your sticker, and you will have to present your car for scrutineering again. The scrutineers reserve the right to spot check any car at any time during the event.

### HV ACCUMULATOR SCRUTINEERING (EV AND E-DV) Location: Charging & Scrutineering area Time limit: 90 minutes

During the accumulator scrutineering, teams have to bring their batteries in the charging area. You will have to open the accumulator container, and the scrutineers will check the inside of the accumulator.

## The followings will be checked:

- The accumulator is built as in represented in the ESF
- There are no obvious mistakes or inadvertencies

### You must have the following items with you:

- The HV Accumulator
- Protective gear and isolated tools to work on the accumulator
- Laptop or something to connect to the AMS
- Anything else you will need to present the working of the AMS
- At least 2 but maximum 4 team members (one of them has to be ESO)

After the successful scrutineering process the accumulator will be sealed and the team will be rewarded with the accumulator scrutineering sticker.

If you have items that need to be rectified you will not get your sticker, and you will have to present your HV accumulator for scrutineering again. The scrutineers reserve the right to spot check any car at any time during the event.

## EV2 SCRUTINEERING (EV AND E-DV)

Location:	Charging & Scrutineering area
Time limit:	60 minutes

During the second part of electrical scrutineering it will be checked that your car fulfills the EV rules with the tractive system active. Among other aspects, the correct working of the BSPD will be tested, so please have the BSPD test tool ready. The Ready-To-Drive-Sound test will be performed here as well. The data logger will also be tested in this step.

After your car passes E-scrutineering, critical parts of the tractive system will be sealed. The scrutineers reserve the right to spot check any car at any time during the event, even after endurance.

## The followings will be checked:

- The working of the BSPD
- The working of the Safety Circuit
- Data logger connection

## You must have the following items with you:

- Documentation (either printed or electronic format)
- BPS test device
- The vehicle (in fully assembled, ready-to-race condition including mounted data logger (see DV 1.3))
- At least 2 but maximum 4 team members (one of them has to be ESO)

After the successful scrutineering process the team will be rewarded with the EV2 scrutineering sticker.

If you have items that need to be rectified you will not get your sticker, and you will have to present your car for scrutineering again. The scrutineers reserve the right to spot check any car at any time during the event.

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The AMS connections, the location of the thermal measurements, and the accuracy of the voltage measurements.





## **AUTONOMOUS SCRUTINEERING (DV ONLY)**

Location: Charging & Scrutineering area Time limit: 30 minutes or integrated to EV2 for E-DV cars

During the autonomous scrutineering it will be checked that your car fulfills the DV rules with the tractive and the autonomous system active. Scrutineering steps not related to the Autonomous System can proceed without this step.

### You must have the following items with you:

- One ASR
- The vehicle (in fully assembled, ready-to-race condition)
- Documentation (either printed or electronic format)
- Data sheets for all perception sensors
- Documents to proof that all perception sensors meet local legislations
- RES remote control
- Tools needed for the (dis)assembly of parts for DV inspection

After the successful scrutineering process the team will be rewarded with the Autonomous scrutineering sticker.

If you have items that need to be rectified you will not get your sticker, and you will have to present your car for scrutineering again. The scrutineers reserve the right to spot check any car at any time during the event.

## **TILT TABLE TESTING**

Location: Dynamic Area

Tilt testing checks if the vehicle complies with the liquid spillage and rollover stability rules. Please present the car in ready-to-race condition, meaning all the liquids of the car should be filled properly, and all components of the car are mounted.

The vehicle will be placed upon the table with the tallest driver aboard. 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 60 degrees, representing a cornering force of 1.7G. There must be no fluid leakage and the upper wheels must remain on the table. (Some vehicles may lift one wheel. The station manager should be consulted if this occurs.) The test is performed again tilting the car to the other side as well. The person in charge at the tilt table will sign the inspection form, which travels with the car. A sticker is applied on the car, to indicate it passed the tilt table test.

Should the vehicle fail, the car must be repaired and re-tested. Vehicles may be asked to return to this station for re-certification at the discretion of the officials.

Safety guidelines for the tilt area:

- All master switches off at all times. They can be removed from the car.
- Push the car on and off the table, taking care to avoid damage to the vehicle.
- Inside wheels are to be placed against the guard of the tilt table.
- Attach a strap to rollover hoop and side of table which is to be elevated. Allow a little slack.
- Use absorbent material to soak up leaks (may be obtained at fuel station). Keep a fire extinguisher at hand.

After the successful scrutineering process the team will be rewarded with the Tilt sticker.

### RAIN TESTING (EV AND E-DV)

Location: Dynamic Area

Teams have to pass a special rain test during scrutineering, according to the rules before and after the rain test an IMD test will be performed. During the rain test, the tractive system has to be active and the driven wheels removed. It is not allowed to have a driver seated in the car during the rain test.

After the successful scrutineering process the team will be rewarded with the Rain sticker.

## NOISE TESTING (CV AND C-DV)

Location: Dynamic Area (Engine Test Area)

## The followings will be checked:

- Compliance with the noise level according to the CV3.2
- Compliance of the ETC system (if present)
- Compliance of the BSPD system

### You must have the following items with you:

- A pilot
- Anything else you will need to present the working of the ETC & BSPD
- At least 2 but maximum 4 team members

The vehicle will be checked for compliance with the sound level restrictions. Teams must bring a laptop to show the engine speed monitored from the ECU on the laptop. FS East will apply the rule "CV3.2 Maximum Sound Level" of the FS Rules 2022. If the vehicle is unable to pass in two attempts, the car must be repaired and then brought back for retesting.

The noise level can be measured at any time during the dynamic events. Penalties may be given if the sound level exceeds the mandated maximum. Vehicles may be forced to return to this station for re-certification should the officials deem it necessary. Re-certification may be required if work is performed on the vehicle's exhaust system or if the vehicle is involved in an incident which results in vehicle damage.

After the successful scrutineering process the team will be rewarded with the Noise sticker and the ETC sticker (if applicable).

## **BRAKE TESTING**

Location: Dynamic area

Brake Testing checks that the vehicle can be brought to a controlled stop.

## Each driver must know the proper procedure of the brake test:

- With the car at the start line of the station a green flag (or similar signal) should be used to signal the start of each run.
- The driver must accelerate on a short straight (typically getting into 2nd gear) until reaching the braking area, which is a box defined by pylons.
- For electric vehicles, the tractive system has to be switched off by the driver before entering in this box.
- The car fails the test if the TSAL is still blinking 5 seconds after shutting down the tractive system.
- Once inside the box, the driver must apply the brakes with enough force to demonstrate
- While braking, the centerline of the vehicle should be paralel with the centerline of the braking area zone. (Maximum rotation compared to idle state is 15°)

If the vehicle passes the test, the person in charge signs the approval form and provides the team with the Brake sticker. The vehicle is now free to proceed to the practice track or to the dynamic events.

If the vehicle is unable to pass the brake test in the next two attempts, the car must be repaired and then brought back for retesting. Re-certification may be required if work is performed on the vehicle's brake system or if the vehicle is involved in an incident which results in vehicle damage.

### **DRIVERLESS BRAKE TESTING (EBS) (DV ONLY)** Location: Dynamic area

Autonomous Brake Testing checks that the vehicle can be brought to a controlled stop remotely. Normal Brake test must be done before the Driverless Brake Test After the Go Signal, the vehicle has to accelerate to at least 40 km/h in a straight line and stop when the RES button is pressed. Once the RES is triggered, the vehicle has to stop within 10 meters, and have to switch off the tractive system. (Shut down the engine in the case of CV cars, or switch off the HV in the case of EV cars.)



Full lock-up needed for all four wheels at the same time, and engine can not shut down during brake test.





### **PRE-RUN AND POST-INSPECTION**

Location: Exit of the dynamic area

Pre-Run and Post-Inspection can be expected by the teams where points marked with  $\Delta$  in the Inspection Sheet will be in focus. The scrutineers can decide to check other points as well. Based on the result of the Post-Inspection teams can receive time penalty or DQ according to IN12.1.

## **VEHICLE TESTING**

Location: see the map of the venue

Driving practice is only allowed within the designated test areas and at the designated times. There will be two test tracks provided for the CV and EV teams. The ground is made of asphalt. Teams may use the test area to set up and test their cars. The testing time per team depends on the waiting queue and will be 3 to 5 minutes per run. For additional testing, teams have to go to the end of the queue.

NOTE: If no other team's are waiting for testing, it's allowed to use the test track continuously.

## **ACTION CAMERAS ON THE CAR**

As the rule D 2.2.1. states, "During driving, the mechanical integrity of the vehicle must be maintained." Teams may register they action cameras at the event control. Losing a registered action camera will not lead to disqualification from a specific event, if the team agrees to share all recorded data with the organisers at the Event Control each day until the Event Control's closing time.

## **DYNAMIC DISCIPLINES**

All of the dynamic disciplines are carried out in the dynamic area. For more details, please check the site plan in section.

## **SKID PAD**

FS East 2022 offers 4 tries for competing teams, including 2 drivers. Each driver has maximum two runs of Skidpad. Similar to the Acceleration event, the waiting queue for the Skidpad event is a two lane queue: First one is for the first attempts, second lane for the second to fourth attempt of the team The queue closes 15-30 minutes before the end of the event, depending on the number of cars waiting. There will be a two lane queue for this event. First one is for the first try, second lane for the second to fourth try of the team. The queue closes 15-30 minutes before the end of the event, depending on the number of cars waiting. At the closing time of the Skidpad Event, only that vehicle is allowed to start their run, which is standing at the start line of the Skidpad Event.

In case of longer queue in the 2nd - 4th attempt row, organisers have the right to let from the 2nd to 4th attempt drivers between two first attempts.

Each driver can choose to drive one or two runs in a row. The second run may be performed immediately after the first run without re-entering the queue.

### MASTER RULE:

The final appointment, when it is allowed to start a run in the dynamic area is 17:55 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

## **DV SKID PAD**

Each team will have two runs. There will be a two lane queue for this event. Lane one is for the first run of the team, lane two for the second run. If the vehicle does not enter "AS Ready" state within 1 min after being staged, the team may be sent back to the end of its initial row by the officials. If this happens five times with the team, they may be sent back to end of the second row.

## ACCELERATION

FS East 2022 offers 4 tries for competing teams, including 2 drivers. Each driver has maximum two runs of Acceleration. Similar to the Skid Pad event, the waiting queue for the Acceleration event is a two lane queue: First one is for the first attempts, second lane for the second to fourth attempt of the team . The queue closes 15-30 minutes before the end of the event, depending on the number of cars waiting. In case of longer queue in the 2nd - 4th attempt row, organisers have the right to let from the 2nd to 4th attempt drivers between two first attempts.

After passing the finish line of the Acceleration, there is a big slow down area. To return to the start for the second run, you have to turn right, and go back to the starting position and turn back right to the starting line. Follow the instructions by the marshalls. On your way back, please maintain a slow car speed for your safety (max 25 kph) and that of the marshalls.

The driver of the team can choose to drive one or two runs in a row. The second run may be performed immediately after the first run without stepping back to the end of the queue.

At the closing time of the Acceleration Event, only that vehicle is allowed to start their run, which is standing at the start line of the Acceleration Event.

## MASTER RULE

The final appointment, when it is allowed to start a run in the dynamic area is 17:55 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

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## **DVACCELERATION**

Each team will have two runs. There will be a two lane queue for this event. Lane one is for the first run of the team, lane two for the second run. If the vehicle does not enter "AS Ready" state within 1 min after being staged, the team may be sent back to the end of its initial row by the officials. If this happens five times with the team, they may be sent back to end of the second row.

The final appointment, when it is allowed to start a run in the dynamic area is 17:50 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

## AUTOCROSS

**Coursewalk:** non-motorised vehicles are allowed to use in a safe manner.

FS East 2022 offers 4 tries for competing teams, including 2 drivers. Each driver has maximum two runs of AutoCross. Similar to the Acceleration and Skidpad event, the waiting queue for the Autocross event is a two lane queue: First one is for the first attempts, second lane for the second to fourth attempt of the team. The queue closes 15-30 minutes before the end of the event, depending on the number of cars waiting. In case of longer queue in the 2nd - 4th attempt row, organisers have the right to let from the 2nd to 4th attempt drivers between two first attempts.

The driver of the team can choose to drive one or two runs in a row. The second run may be performed immediately after the first run without stepping back to the end of the queue.

Cones are used for the track boundary and for the slalom turns. The track direction is clockwise. Each run comprises one lap with a flying start. Each driver can choose to drive one or two runs in a row. The second run may be performed immediately after the first run without re-entering the queue. If the runs are performed separately, the driver must exit the course after the first run and drive through the driver change area slowly back to the start for the second run. The queue closes 15-30 minutes before the end of the event, depending on the number of cars waiting.

Maximum 2 cars are allowed to run parallel on the AutoX track to fasten the AutoX Event. If a yellow flag interrupts the run of the cars, the run can be re-run.

## MASTER RULE:

The final appointment, when it is allowed to start a run in the dynamic area is 17:55 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

## **ENDURANCE**

Coursewalk: non-motorised vehicles are allowed to use in a safe manner.

The endurance track will be set up for Tuesday. The track direction is clockwise. The colour of the cones is similar to the Autocross event. The additional overtaking lanes are marked with blue cones.

The starting order for Endurance results from the Autocross event. The starting order will be displayed at the Event Control.

The IC and EV cars race separately, with the slowest car starting at the starting time of the Endurance event. The next car starts about 3 minutes later. Maximum three cars will be on the track at the same time. During the driver change, two scrutineers check the car. After successful driver change, the second driver drives to the entrance gate. If a marshal causes the driver change to take longer than 3 minutes, the time caused by the marshal will be subtracted. Timekeeping is watching for these incidents.

**IMPORTANT:** In order to have equal and fair conditions during the Endurance event at least 3 cars have to be on the track during the whole time of the Endurance event.

Therefore the Organisers will maintain a waiting queue of 3 teams. It is the team's responsibility to arrive in the waiting queue before the deadline -which will be announced for each team in the loudspeakers 15 minutes before the deadline.

A delay will be penalised with 2 minutes penalty and the team will be able to start only at the end of the endurance event.

NOTE: According to experience of earlier years Formula Student events, it is expected to have sudden need for new teams in the waiting queue in the first section of the endurance event due to early DNFs. Please be prepared to attend the queue on time!

If you get a blue flag while driving, please drive into the next overtaking lane. At least 2 overtaking zones will be provided. Please start slowing down when you are in the overtaking lane, NOT before. For the faster car, it is important not to follow the car in front too closely, otherwise serious accidents may be caused if the cars touch each other. Wait for the green flag to reenter the track. Rear-ending a slower car will definitely lead to a disqualification of the faster car!

### MASTER RULE

The final appointment, when it is allowed to start a run in the dynamic area is 17:55 every day (Test Track, Skidpad, Acceleration, Autocross, Endurance). All drivetrains must be turned off by 18:00. (All dynamic disciplines including Engine Test, Noise Test, Rain Test, Brake Test) Officials have the right to refuse the start of the run, if they judge, that the run will be not completed until the scheduled finish date of the event.

Vehicles that successfully finish Endurance and those that make it past the driver change **must** report to the Parc Fermé **upon request of scrutineers. They will stay there until passing the post-endurance scrutineering.** 

## **DV AUTOCROSS AND TRACKDRIVE**

Coursewalk: non-motorised vehicles are allowed to use in a safe manner. During the course walk no equipment (e.g. antennas, sensors, cameras, etc) other than analog measurement devices (i.e. measurement wheel or measurement tape) is allowed.

Driverless Autocross Event takes place on the same track as Driverless Trackdrive Event. Driverless Autocross and Driverless Trackdrive Event will be the same in the Event Schedule, teams can choose, whether they start their Autocross or their Endurance Run, when entering the track

The Trackdrive track will be set up for Friday. The track direction is clockwise.

The starting order for Trackdrive results from the Skid Pad and Acceleration event. There will be one run consisting of ten laps. The starting order will be displayed at the Event Control. If the vehicle does not enter "AS Ready" state within 1 min after being staged, the team may be sent back to the end of the starting order by the officials. Please look for the 5 minutes preparation team described in the FS East rules!

# <HANDBOOK> #FSEASTAUG8<>12





## **STATIC EVENTS**

## **REVIEW PERIOD**

During the review period teams can discuss their static event results with the corresponding static event leader. The static event leaders can offer an insight into the score sheet of the respective team or provide feedback based on the score sheet. During this period objective, administrative mistakes can be protested (i.e. mistake in the summarization), but the subjective decision of the judges about the given points cannot be protested.

## **ENGINEERING DESIGN EVENT**

Location: Team's pits (Initial judging) Dynamic area (Engineering Design Final) - in case of rain: alternative location

During the competition, a discussion with the judges will take place, next to the team's vehicle. For DV category the design judging includes the judging of both the "base vehicle" and the autonomous system. Teams with one common DV and EV/CV car will be judged in the EDE DV Event.

## Here are some tips to help you score higher in the engineering design event:

- Be on time.
- Make sure your car is in race-ready condition and your team members are well prepared.
- Bring all engineering documentation with you. Read and understand the rules.

The exact time of your team's design judging can be found in the Static Events Schedule.

## JUDGING SEQUENCE

At Formula Student East, design judging will involve two parts:

- Initial judging of all teams,
- Final judging, ranking the top teams.

You should start with a 3-5 minute overview presentation of the car. It is up to you how you use this presentation time: introducing the team, the car or the design goals etc. The main part is the discussion with the judges. Finally the judging ends with 5 minute feedback.

To score high in the design event, we would suggest you to bring all necessary papers and sample parts with you, which underline your engineering work. It is allowed to show documentation on a notebook/tablet. If you have done any tests, bring the results with you. Judges only believe what they see, not what you tell them. Read the Caroll Smith "Everything You Wanted to Know about Design Judging" paper available on the Formula SAE website.

The judges will be around on Monday and Tuesday. Feel free to ask them about your car and your project. They will be more than happy to answer all your questions.

## **ENGINEERING DESIGN FINAL**

Top teams from each category will qualify to the Engineering Design Final. There is no time limit in the design final. The design final is not public.

The Engineering Design Event Final will be on Tuesday for DV teams and on Wednesday on CV and EV teams. A briefing for the participating teams will be held about the practical information regarding the design final on the day of the final in the Event Control.

## **COST AND MANUFACTURING EVENT**

Team's pits (Initial judging) Dynamic area (Cost and Manufacturing Final) - in case of rain: alternative location

During the competition, a discussion with the judges will take place, next to the team's vehicle. The discussion is split into three parts: The Bill of Material (BOM) Discussion, the Cost Understanding and the Real Case Scenario presentation.

## THE BILL OF MATERIAL DISCUSSION

Three Cost Report Documents (CRD) were submitted to the competition website by four weeks prior the competition. The report will follow the guidelines set forth in the published rules. From this analysis the judges will determine if all parts and processes were included. The Cost Report is judged on the accuracy, quality of the cost report. The judges will add penalties if errors are detected, or if items are omitted.

## THE COST UNDERSTANDING

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

## **REAL CASE SCENARIO PRESENTATION**

A presentation about a previously handed out topci in 10 minutes.

## Schedule of the Cost, Manufacturing and Sustainability Event for Judging (max. 55 minutes):

- 5 min for introductory presentation of the car and/or team,
- 15 min for discussion and questions about CRD,
- 15 min for the discussion of the Cost Understanding,
- 15 min for Real Case Scenario presentation.
- 5 min for consultation of the judges and feedback to the teams

## **COST AND MANUFACTURING FINAL**

Top teams from CV, EV and DV will qualify to the Cost and Manufacturing Final . The Cost and Manufacturing Final is not public. A briefing for the participating teams will be held about the practical information regarding the final on Wednesday afternoon in the Event Control. The location of the final will be announced on the briefing.

## **COST AND MANUFACTURING SCORING**

NON FINALIST Presentation Event score =  $(P_{y_{OUB}}/P_{MAX}) \times (100-n)$ 

## Where:

"P\_{\_{MAX}}" is the highest score awarded to any team not participating in the finals "P\_{\_{YOUR}}" is the score awarded to your team "n" is the number of finalists

## FINALISTS

"n" th Place 100-(n-1) points

It is intended that the scores will range from near zero (0) to a hundred (100) to provide good separation. If a team does not attend the Cost and Manufacturing Finals despite its nomination, it will automatically receive the last place in the Finals.

## **BUSINESS PLAN PRESENTATION EVENT**

Location: Business Rooms (Initial judging), TBD (Business Plan Presentation Final)

## THE PRESENTATION

Competing teams have to keep a presentation that complies with the Rules.

## PART OF PRESENTATION: DEEP DIVE TOPIC (DDT)

All teams receive a given task prior to the event, a specific deep dive topic. This task has to be included into the presentation and be presented in the given presentation time and will be evaluated by the Judges.

## JUDGING SEQUENCE

The Business Plan Presentation Event is held in a three step approach. In advance, every team has to submit a Business Pitch Video before the event. The first presentation round (incl. Deep Dive Topic) is relevant for all eligible teams and the Finals is relevant only for the top teams decided by the Judges given by the results of the first round.

Location:







## **INITIAL JUDGING**

During the initial judging, each team gets the opportunity to present to the Judges. Therefore, the overall group of Judges is divided into smaller groups, who will listen and judge the team presentations. At the end of each presentation, the judges are requested to ask relevant questions and after a little break of scoring to give feedback.

## Schedule for each presentation (max. 35 minutes)

- Max. 5 minutes for set-up & preparation
- 10 min for Business Presentation
- 10 min for Q&A on the presentation
- 5 min for Feedback to the teams
- Max. 5 min de-installation

This time schedule needs to be followed strictly to not disrupt the overall time schedule for the whole day. During the presentations only judges and the presenting team members can participate and special permission to official Press-staff. Special entry permission should be asked and decided by the Business Event Leader.

## **BUSINESS PLAN PRESENTATION FINAL**

Top teams from each category decided by the Judges given by the results of the initial round will qualify to the Business Plan Presentation Final. This Final will be held on Tuesday evening. The teams will present to the selected Judges and is open to all Visitors (i.e. other teams, guests etc.).

The finalist teams will present directly one after the other without any questions/interruptions by the Judges, based on order of drawing of lots prior to starting.

Afterwards, the Judges will hold a de-briefing and decide on the ranking of the finalist teams.

## Schedule for each FINAL presentation:

Max. 5 minutes for set-up & preparation

- 10 min for Business Presentation
- Max. 5 min de-installation

**BUSINESS PLAN PRESENTATION SCORING** 

## NON FINALIST

Presentation Event score =  $(P_{your}/P_{MAX}) \times (75-n)$ 

## Where:

"P<sub>MAX</sub>" is the highest score awarded to any team not participating in the finals "P<sub>YOUR</sub>" is the score awarded to your team "n" is the number of finalists

## FINALISTS

"n" th Place 75-(n-1) points

It is intended that the scores will range from near zero (0) to seventy-five (75) to provide good separation. If a team does not attend the Business Finals despite its nomination, it will automatically receive the last place in the Finals. If a team misses their allocated time, the team will receive zero presentation points. The team that makes the best business presentation (regardless of the quality of the car) wins the event

## DATA PROJECTION EQUIPMENT

Plasma display/LCD Monitors will be provided by FS East. These displays will have HDMI Input Connector. The organizers will not provide any other presentation equipment (e.g. laptop). Teams planning to use other equipment as a part of their presentation, are responsible for bringing, or otherwise arranging for their own equipment. Please note that only Schuko sockets (CEE 7/3) will be provided.

## STATIC SCHEDULE



You will find the updated Static Event schedule on our website on the following link: fseast.eu/static-schedule-2022







## **RESULTS**

The results will be posted on the results board at the Event Control as soon as they are available. Furthermore, they will be published online at the FS East website.

## **PROTESTING OF RESULTS**

During the review period teams can discuss their static event results with the corresponding static event leader. The static event leaders can offer an insight into the score sheet of the respective team or provide feedback based on the score sheet. During this period objective, administrative mistakes can be protested (i.e. mistake in the summarization), but the subjective decision of the judges about the given points cannot be protested.

## **REQUIRED REVIEW**

Any team that intends to protest a rule interpretation, score, judge's decision or any other aspect of the competition, must present the issue to the FS East rules committee, represented by Zsofia Bodo for discussion and possible resolution before the protest is filed. For locating him, please contact event control.

## **CAUSE FOR PROTEST**

A team may protest any rule interpretation, score or official action (unless specifically excluded from protest) which they feel has caused some actual, non-trivial harm to their team, or has had a significant effect on their score. Teams may not protest rule interpretations or actions that have not caused them any significant damage.

## **PROTEST PERIOD**

Protests must be filed within one hour after the action being protested has occurred or the scores for the activity involving the protest subject are posted.

**PROTEST FORMAT** Protests must be handed in in a written form and submitted by the team captain to FS East rules committee.

**PROTEST BOND** The protesting team must post a 25 points bond to be deducted from their score if the protest is denied.

**DECISION** The decision of the officials regarding any protest is final.

## **FS EAST RUNS**

Location: Hungaroring GP Track

Sport and fitness is a very important thing in our everyday life, even on an FS weekend. You can go for a run on the track in the mornings, with a few simple rules:

- You are only allowed to be on the track on foot (no roller, no bicycle, no unicycle, no jetpack)
- You have to leave until the time window is closed, otherwise we cannot start the dynamic events on time, and you will have less time to finish them
- If you fail to finish your run on time, you will be moved to the end of the queue in all dynamic disciplines



Those teams who booked their accommodation and intend to stay at the FS East Camp have to accept the following guidelines and rules. We created this list of rules to ensure all the necessary safety and comfort elements for the campers. In emergency cases the event site emergency scenarios are the normatives (see page 2-3). In any urgent cases you can call the emergency numbers.

## **CHECKING-IN TO THE CAMPSITE**

Checking-in to the campsite is handled at the temporary Ticket Center located at the entrance of the FS East Camp. After a successful registration campers get their wristbands and may proceed to the FS East Camp. Campsite registration is available between 12:00 and 18:00 on Sunday (August 7th), and the rest of the event days during the opening hours of the Ticket Center. Continuous camp duty - people, who can answer your questions - will be available at the entrance as well.

## In case you arrive after the opening hours of campsite registration, call us in advance!

All team members who booked their accommodation at the campsite must show up, sign the check-in form, and agree the FS East Camp Rules in order to access the campsite. We're only able to let in the members of the teams who've already transferred the accommodation fee. Additional team members are able to pay by cash at check-in at the Ticket Center.

## **RESERVABLE AREA**

Based on the number of team members we provide a camping area of approx. 225 square meters for each team. Larger constructions (e.g. kitchen tents, pools, football field, etc.) should be mentioned in advance in the Accommodation Booking form. Constructions higher than 6 meters are not allowed to be built up on the premises of the campsite.

**PARKING IN THE CAMPSITE** 

The campsite has a separated parking area. Parking is allowed only in the designated area.

Please note, that you can't park your vehicles neither in the Social area of the FS East Camp nor between the tents. **ATTENTION:** Make sure that your caravan or car is not dropping or flowing. Prevent it!

**COOKING, FIRES AND SMOKING** Using open fire (e.g. charcoal, gas stove, firewood) for cooking is restricted to the premises of the Fun & Grill area. Electric cooking devices can be operated at your own tents as well considering the limitations of the power supply.

NOTE: If you have any cultural or religious objections regarding these rules, please contact us in advance.

Smoking is strictly prohibited in the sleeping area, in all tents, in the parking slots and in the toilet or shower containers.

**FOOD & DRINKS** 

The catering tent provides food and drinks at the event site, where you can pay with Hungarian Forint, Euro or credit card. At the FS East Camp only the venue's own buffet service will be available.

NOTE: Alcoholic drinks are forbidden at the event site - so just drink as much as you can "sleep out", to be perfectly fit for the next day.

**BATHROOMS** We provide separate bathroom containers for male and female participants at the campsite with showers.

## **POWER SUPPLY**

The electric network at the campsite provides electricity for each team to consume. You can also bring your own power supply - in that case you must prepare with one fire extinguisher for each of them.

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## **NOTES**





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SIEMENS

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## CHANGELOG

Version	Date	Modification	Page
1.1.0	3rd of August 2022	Changes in the schedule	6-23
1.0.0	28th of July 2022	Initial release	-



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