

FORMULA STUDENT **NETHERLANDS**



09-12 July 2018

COMPETITION HANDBOOK 2018

Venue Map



Timetable

FSN2018 Time Table		7-jul	8-jul	9-jul	10-jul	11-jul	12-jul	13-jul
Campsite Area	Campsite	09:00-23:59	ALL DAY	ALL DAY	ALL DAY	ALL DAY	ALL DAY	00:00-12:00
Welcome Centre	Welcome Centre	09:00-23:59	ALL DAY	08:00-22:00	08:00-22:00	08:00-22:00	08:00-22:00	
	Welcome Centre	09:00-23:59	00:00-17:00					
	Welcome Centre	09:00-22:00	08:00-22:00	08:00-22:00	08:00-22:00	08:00-22:00		
Paddock Area	Paddock		19:00-22:00	08:00-22:00	08:00-22:00	08:00-22:00	08:00-19:00	
	Food Kiosk			TBA	TBA	TBA	TBA	
	Paddock Restaurant			TBA	TBA	TBA	TBA	
	Pit Garages		19:00-22:00					
	Pit Garages			09:00-18:00	09:00-18:00	09:00-12:00	17:00-19:00	
	Techno Centre			09:00-18:00	09:00-18:00	09:00-18:00	09:00-16:00	
	Fuel Station			09:00-21:00	09:00-21:00	08:00-21:00		
	Charging Bay			09:00-19:00	09:00-19:00			
	Pit Garages			09:00-19:00	09:00-19:00			
	Pit Garages			09:00-19:00	09:00-19:00			
	Briefing Room			08:30-18:00	08:30-18:00			
	Briefing Room				TBA			
Track	Practise Area			09:00-18:00	09:00-18:00	09:00-18:00	09:00-16:00	
	Main Straight			19:30-20:00				
	TT Junior Track				TBA			
	Ruskenhoek Corner				18:00-20:00	09:00-11:00		
	Main Straight					09:00-14:00		
	TT Junior Track					13:00-18:00		
	TT Junior Track						09:00-17:00	
The Plaza								
	Opening Ceremony		TBA				TBA	
	Award Ceremony						TBA	
	Party							
Spectator Areas								
	Grand Stand		09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	
	Haarbocht Tribune		09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	
	Ruskenhoek Slope		09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	
	TT Junior Track Slope		09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-16:00	
Medical Centre								
	First Aid Nurse on site		ALL DAY	ALL DAY	ALL DAY	ALL DAY	ALL DAY	
	First Aid Doctor on site					09:00-18:00	09:00-18:00	
	Fire Department Truck on site				TBA	TBA	TBA	

Judging Schedule

TBA

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EVENT SITE INFORMATION

Venue Address

TT Circuit Assen
De Haar 9
9405TE Assen
The Netherlands

www.ttcircuit.com

Contact Information

If your team is in an emergency situation, you may call directly to the FSN Event Managers:

Mr. Nick van Eerten | +31630735826
Mr. Paul Sieljes | +31623505479

For all other communication, please find the nearest official with a mobile radio

First Aid

There will be first aid on site during event days (09-12 July 2018). A nurse will be available 24/7 from the medical centre, located in the paddock. On dynamic event days (10-12 July 2018) there will also be a doctor available in the medical centre. If an emergency occurs, always call the emergency services on emergency number 112.

The nearest hospital (3,6km) is:

Wilhelmina Ziekenhuis Assen
Europaweg-Zuid 1
9401 RK Assen
The Netherlands

Fire Department

A fire truck will be on-site on dynamic event days (10-12 July). The fire department can be contacted via emergency number 112.

Restricted Areas & Access

During FSN2018, all dynamic event areas (Main Straight, Ruskenhoek Corner, Practice Area and the TT Junior Track), all scrutineering areas and the charging bay are restricted areas. These may only be accessed by officials and team members with a dynamic pass. Each team will be handed four passes in total. Dynamic passes may not be loaned to spectators or sponsors.

Team Access

All team members must wear the FSN2018 bracelet, so you can be identified as an official participant in the event. The bracelets are handed to the team manager at registration.

General Access

FSN2018 will be free for anyone to visit. Your team may invite an unlimited amount of sponsors, supporters and fans to the event. No registration is required. FSN offers VIP services at a discount rate for the guests of teams. Please contact us for more information.

Photographers

All teams may register up to two members of their team as photographers. These members will be handed a FSN jersey and may access dynamic areas with photography equipment. To register as a photographer, visit the welcome centre with the photography equipment. The members do not have to be classified as the teams' press officer on the TMRF. All photographers will be asked to sign a liability waiver. Videographers are classified as photographers.

Local Area

Supermarket:

+/- 6 KM	Poiesz Het Sticht 3 9405 NS Assen
+/- 7 KM	Albert Heijn Bremstraat 9 9404 GA Assen
+/- 7 KM	ALDI Bremstraat 5 9404 GA Assen
+/- 7 KM	Jumbo Kroonwerk 19 9401 BA Assen
+/- 8 KM	Poiesz Schoolstraat 10 9421 SM Bovensmilde
+ / - 8 KM	Jumbo Nijlandstraat 141 9401 AL Assen

TEAM INFORMATION

Route & Arrival Instructions

The TT Circuit is located south of the city of Assen, next to E232/A28 motorway. Upon arrival, coming from the north or the south, take exit 3 Ia - Assen Zuid and follow TT Circuit signs.

Upon arrival, the team manager must first report to the Welcome Centre and register the team. He/She will receive all documentation/passes etc. Then, the FSN Crew will guide you to the campsite. Please let us know if you need to access the site with any vehicle above 3.5 tonnes.



After taking exit 3 Ia and following the TT Circuit sign, you will encounter the situation shown above 400m after the roundabout at the motorway exit. Go straight on and follow the left lane.



After 500m, you will arrive at the paddock entrance lane. Go right for the paddock and welcome centre, go straight on for the campsite.



You will arrive after 300m at the Campsite gate (shown above). FSN Crew will direct you. Please note there is an alternative route for vehicles above 3.5 tonnes.

Opening Ceremony

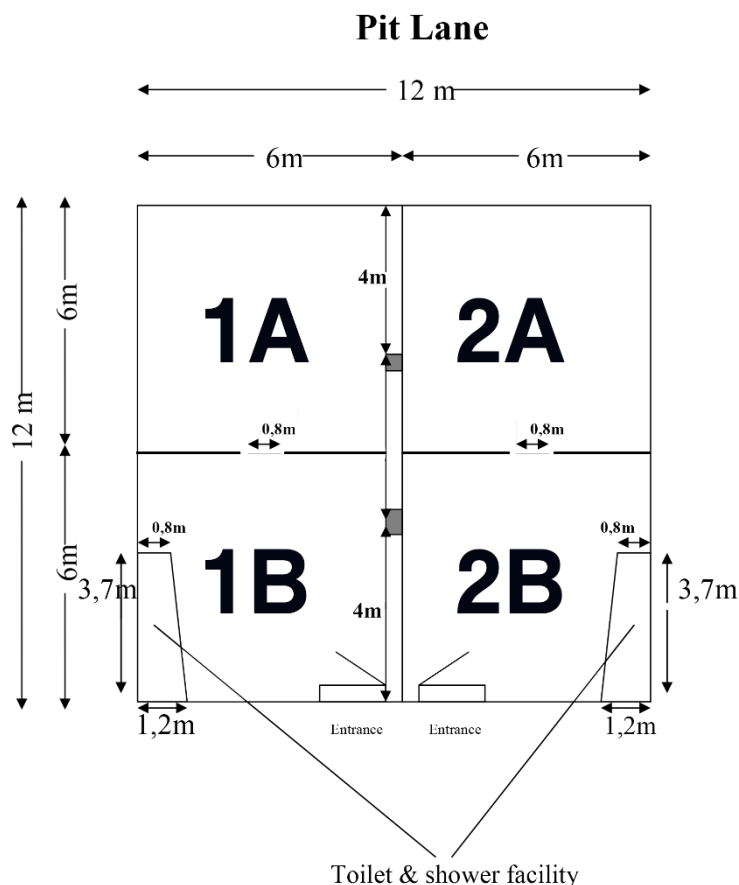
All team members must attend the opening ceremony in the TT Hall.

Pit Garages & Construction

After the opening ceremony, all teams may construct their pit garages. The TT Circuit contains 34 pit garages. Each garage will be shared by two teams according to the allocation table:

Table TBA

Each team will have a 6m x 6m space within the pit garage. Please see the figure below:



Engine Running

Engines may only be run in the following areas: Noise Test, Brake Test, Practice Area, Dynamic Event Areas. Your team will be disqualified from the competition if you start the engine anywhere else on the venue, this includes the campsite area.

Driver's Equipment

Anytime the driver is in the cockpit with the engine/TS running/on, the following approved safety equipment must be worn: helmet, driver's suit, underwear, racing gloves, racing shoes, and hair covering.

Vehicle Movement

Vehicles may not move under their own power anywhere but on the practice or competition tracks. Off track vehicles must be pushed at a normal walking pace by means of a "Push Bar" with all four (4) wheels on the ground, a team member sitting in the cockpit to steer and brake and with another team member walking beside the car.

Transponder / RFID

When participating in dynamic events, all cars must be equipped with a transponder type AMB/MyLaps TranXI60. These will be provided by the organization. To collect your transponder, please visit the Welcome Centre. A €50,- deposit (in cash) will be asked. The transponder must be placed on the right side of the vehicle from the driver's perspective, between the upper and lower wishbones or equivalent. Livetiming via the MyLaps Speedhive app will be available throughout the dynamic events. Results are not official until published and signed by the organization.

Scrutineering

All teams must pass scrutineering before they are allowed to participate in dynamic events and the practice area. Teams must pass through the scrutineering process in the correct order:

1. Accumulator Inspection (EV Only)
2. Electrical Inspection (EV Only)
3. Safety Inspection
4. Chassis Inspection
5. Technical Inspection
6. Fuel (CV Only)
7. Tilt Test
8. Noise Test (CV Only) / Rain Test (EV Only)
9. Brake Test

Accumulator Inspection (1) and Electrical Inspection (2) will take place in the charging bay, located in pit garages 33&34. Safety Inspection, Chassis Inspection and Technical Inspection will take place in the scrutineering bay (known as Techno Centre). Fuel pick up (6) and the Rain Test (8b) are located at the Fuel Station. The Tilt Test (7) is located in pit garage 2. The Noise Test (8a) and Brake Test (9) are located in the pre-grid area and pit-lane exit.

For EV Class Teams, please only bring the accumulator container(s) on accumulator hand carts to Accumulator Inspection (1).

Scrutineering Order

The first eight (8) teams from either class (IC/EV) to submit and pass their Vehicle Status Video (VSV) will be placed first in line for scrutineering. Submitted VSVs will be reviewed in order of submission. After these teams have attempted their first try, all other teams are invited to attempt scrutineering. Note that there will be a time limit for the first scrutineering attempt for teams on the scrutineering order list.

Charging

Teams may only charge HV accumulators in the charging bay area, supervised by FSN scrutineers. Teams must remove the accumulator container(s) from their vehicle to charge (accumulator handcarts!)

Jacking

When supporting cars off the ground, use strong, sturdy stands which support the vehicle in a stable and secure way. Do not use milk crates, piles of wood, four of the strongest team members, etc.

Fires

No open fires in the paddock including BBQ grills, oxy-acetylene torches, heaters, cigarettes, etc.

Fuel and Oil

No open fuel containers. Waste oil, etc., is to be taken to the fuel station for disposal. Once at the race site, the race cars cannot be fueled except by the FSN provided fuel at the fuel station.

Fire Extinguishers

Fire extinguishers should be close by the vehicle and readily accessible and all team members must be knowledgeable in their use. A fire extinguisher must accompany the car wherever it is in the paddock or moved to any part of the site. A team member must hold a fire extinguisher ready whenever the car is running in your stall.

Vehicle Modifications

No unapproved modification to the vehicle after it has been through tech inspection.

Awards & Closing Ceremony

At FSN2018, 55 trophies will be awarded.

Category	Awards
EV Business Plan Presentation Event	1 st , 2 nd , 3 rd
CV Business Plan Presentation Event	1 st , 2 nd , 3 rd
EV Cost and Manufacturing Event	1 st , 2 nd , 3 rd
CV Cost and Manufacturing Event	1 st , 2 nd , 3 rd
EV Engineering Design Event	1 st , 2 nd , 3 rd
CV Engineering Design Event	1 st , 2 nd , 3 rd
EV Skid Pad Event	1 st , 2 nd , 3 rd
CV Skid Pad Event	1 st , 2 nd , 3 rd
EV Acceleration Event	1 st , 2 nd , 3 rd
CV Acceleration Event	1 st , 2 nd , 3 rd
EV Autocross Event	1 st , 2 nd , 3 rd
CV Autocross Event	1 st , 2 nd , 3 rd
EV Endurance Event	1 st , 2 nd , 3 rd
CV Endurance Event	1 st , 2 nd , 3 rd
EV Efficiency Event	1 st , 2 nd , 3 rd
CV Efficiency Event	1 st , 2 nd , 3 rd
EV Class Total	1 st , 2 nd , 3 rd
CV Class Total	1 st , 2 nd , 3 rd
Overall Classification	1 st

COMPETITION INFORMATION – REGISTRATION AND PAYMENT

Teams may register for FSN2018 via a time-based quiz in January 2018, the final date and time are to be confirmed. There will be separate quizzes for CV and EV class. A team may register for both classes. The quiz must be submitted with a 100% score before the submission time is regarded. A total of 50 teams can participate in this year's competition, 20 slots are reserved for EV class teams and 30 slots for CV class teams.

The top 3 teams in each class from the previous competition are exempt from the registration quiz, these are:

CV Class: *University of Valencia, University of Applied Sciences Munich and University of Ljubljana*

EV Class: *Chalmers University of Technology, Technical University of Freiberg, Technical University of Eindhoven*

If one of these teams decides to pass, this slot will be added to the slots open via normal registration.

After a team has been awarded a place to register for the competition, an invoice will be send. The team has then 72 hours to pay the registration fee and complete the registration procedure. After the payment is confirmed, the registration is final.

The 2018 entry fee will remain at €1250,- ex VAT. per car, including an unlimited amount of team members.

Nb. Campsite bookings will be opened in April 2018 for a surcharge (also unchanged in comparison to 2017)

COMPETITION INFORMATION – STATIC EVENTS

Business Plan Presentation Event

The BPP will be held according to section S1 of the 'Rules 2018'. However, there will be no BPP Final. Therefore the formula for the scoring will be $BPPSCORE = 75 \left(\frac{P_{team}}{P_{max}} \right)$

P_{team} is the score awarded to the team

P_{max} is the highest score awarded to any team not participating in the finals

The location for the event is TBA.

There will be no deep dive topic

Cost and Manufacturing Event

The Cost Event will be held according to section S2 of the 'Rules 2018'. Teams are allowed to use the FSAE template for the cost report, or create the report online via the FSG website and export the file before uploading it to the FSN website. Teams are responsible for uploading their CRD in time. The location for this event is the team's garage.

There is no real scenario subject

Engineering Design Event

The Design Event will be held according to section S3 of the 'Rules 2018'. Please pay extra attention to section S3.5 and be ready for the judges as they will strictly follow the judging schedule. The location for this event is the team's garage.

COMPETITION INFORMATION – DYNAMIC EVENTS

Dynamic Events General Information

Please refer to section D1 of the 'Rules 2018', there is one difference: At FSN2017 dynamics passes will be handed out instead of dynamic vests.

All drivers must attend the mandatory drivers briefing.

Skid Pad Event

The Skid Pad Event will be held according to section D4 of the 'Rules 2018'. The Skid Pad will be made wet regardless of the weather conditions.

Acceleration Event

The Acceleration Event will be held according to section D5 of the 'Rules 2018'. There is no "Top X Shoot-out".

Autocross Event

The Autocross Event will be held according to section D6 of the 'Rules 2018'.

Endurance & Efficiency Event

The Autocross Event will be held according to section D7 of the 'Rules 2018'.