

# DOCUMENTATION RULES



**FORMULA** EAST  
STUDENT  
WHO IS READY?

VERSION 1.1  
RELEASE DATE: 26TH MARCH 2018

#FSEAST2018 #DOCUPLD

## A1. INTRODUCTION

Formula Student East® (hereafter “FS East®”) is a FSAE style Formula Student engineering competition held in Hungary, organised by the Association of Automotive Engineers (formerly Engineers for the Automotive Higher Education Association) since 2016. Formula Student East will allow to participate vehicles with conventional internal combustion engine (gasoline or E85 fuelled) and electric powertrain.

Furthermore Formula Student East welcome the participation of driverless vehicles (both with internal combustion or electric powertrain).

**The three categories will be evaluated separately:**

- Internal Combustion Vehicles (hereafter CV)
- Electric Vehicles (hereafter EV)
- Driverless Vehicles (hereafter DV)

This document contains the FS East Documentation rules.

These specific rules are additions to the Formula Student Rules 2018 document (hereafter “Rules 2018”) published by [Formula Student Germany](#). In case of a conflict between the Rules 2018 and the 2018 FS East rules, the 2018 FS East rules supersede the Rules 2018.

## A2. DEADLINES, PENALTIES, AND ADDITIONAL INFORMATION REGARDING DOCUMENTATION

MISSING A DEADLINE RESULTS IN PENALTIES AS SPECIFIED BELOW.

Note, that for the penalties regarding late submission of documentation, 1 day exactly equals 24h. For further details see “Official Time”.

Teams, which upload obviously unusable information just to pass a deadline can be de-registered from the event in case of recurrence. Affected teams receive a warning in advance.

**Late submissions will be penalized with 10 (ten) points for each overdue day.**

A late submission to a request from the FS East Officials later than 7 days will be penalized with 10 (ten) points for each overdue day.

- A 3rd rejection of a document will be penalized with an extra 25 (twenty-five) points.
- A 4th rejection of a document will be penalized with an extra 50 (fifty) points.
- A 5th, and any further rejection of a document will be penalized with an extra 75-75 (seventy-five per occasion) points.

Failure to submit Engineering Design Report, or Design Spec Sheet, or Autonomous Design Report, or Cost Report Documents - Electronic Copy, or Executive Summary - Electronic Copy documents will automatically result in zero points for the given Event.

FORMULA STUDENT EAST WILL APPLY **APRIL 6TH, 2018, 23:59 CEST** AS A DEADLINE FOR THE FOLLOWING:

Document	Class	Required for	Maximum applicable penalty points
Electronic Throttle Control - System Description	CV and CV DV	Dynamic events	No limit
Team Member Designation and Health Insurance Certificate	All	All events	
Structural Equivalency Spreadsheet (SES) Structural Equivalency 3D model (SE3D)	All	Dynamic events	No limit
Impact Attenuator Data (IAD)	All	Dynamic events	No limit
Electrical Systems Form (ESF)	EV and EV DV	All events	No limit
Electric System Officer(s) Form	EV and EV DV	All events	No limit

FORMULA STUDENT EAST WILL APPLY **APRIL 23TH, 2018, 23:59 CEST**  
AS A DEADLINE FOR THE FOLLOWING DOCUMENTS:

Document	Class	Required for	Maximum applicable penalty points
Autonomous Safety Form (ASF)	DV	All events	No limit
Autonomous System Responsible(s) Form	DV	All events	No limit

FORMULA STUDENT EAST WILL APPLY **MAY 25TH, 2018, 23:59 CEST**  
AS A DEADLINE FOR THE FOLLOWING DOCUMENTS:

Document	Class	Required for	Maximum applicable penalty points
Engineering Design Report and Design Spec Sheet	All	Engineering Design Event	100 out of 150 (Engineering Design)
Autonomous Design Report	DV	Engineering Design Event	100 out of 175 (Engineering Design - Autonomous part)
Executive Summary - Electronic Copy	All	Business Plan Presentation Event	75 out of 75 (Business Plan Presentation)

FORMULA STUDENT EAST WILL APPLY **JUNE 29TH, 2018, 23:59 CEST**  
AS A DEADLINE FOR THE FOLLOWING DOCUMENT:

Document:	Class	Required for	Maximum applicable penalty points
Cost Report Documents (electronic copies)	All	Cost and Manufacturing Event	100 out of 100 (Cost and Manufacturing)

FORMULA STUDENT EAST WILL APPLY **JULY 19TH, 2018, 17:59 CEST**  
(ON THE EVENT SITE) AS A DEADLINE FOR THE FOLLOWING DOCUMENT:

Document	Class	Required for	Maximum applicable penalty points
Business Plan Presentation - Written Copy	All	Business Plan Presentation Event	75 out of 75 (Business Plan Presentation)
Cost Report Documents	All	Cost and Manufacturing Event	100 out of 100 (Cost and Manufacturing)

## A2.1 STRUCTURAL EQUIVALENCY SPREADSHEET (SES)

### A2.1.1 SUBMISSION OF SES + 3 DIMENSIONAL CAD MODEL

All teams must submit a SES. The FSAE SES spreadsheet form is supplied on the [www.fsaonline.com](http://www.fsaonline.com) website. Neither a signed SES approval nor an approval by any other official FSAE competition will be counted as an official approval. In case of any question regarding SES documentation please contact [ses@fseast.eu](mailto:ses@fseast.eu).

### A2.2 IMPACT ATTENUATOR DATA (IAD)

A template of IAD form is supplied on the [www.fsaonline.com](http://www.fsaonline.com) website. The completed IAD form must be uploaded to the FS East website. In case of any question regarding IAD documentation please contact [iad@fseast.eu](mailto:iad@fseast.eu).



## A2.3 ELECTRONIC THROTTLE CONTROL (ETC) SYSTEM DESCRIPTION [CV & CV-DV ONLY]

All CV teams have to upload an ETC System Description. If the team is not intended to use electronic throttle control, they also have to upload this document, with the statement about the fact, they are not willing to use ETC. A template will be available on our website, [www.fseast.eu](http://www.fseast.eu)

Late submission of the System Description will require the team to revert to a mechanical throttle arrangement. The file name has to be the following, without parentheses: “[Car\_no]\_[University name]-[Team Name]\_ETC\_Intent.pdf”

Example: E69\_TU\_Mordor-Horde\_of\_Trolls\_ETC\_Description.pdf

## A2.4 FUEL TYPE ORDER [CV ONLY]

The teams must inform FS East of the type of fuel they intend to use. The fuel type can be chosen after registration at FS East website. The fuel types provided are expected to be 98 octane (ROZ 98) gasoline and E-85.

## A2.5 ELECTRICAL SYSTEM FORM (ESF) [EV ONLY]

All EV teams and DV teams with electric traction system must submit an Electrical System Form. A template of this form is supplied on the [www.fseast.eu](http://www.fseast.eu) website.

**The ESF must contain the datasheets of the following safety related components:**

- Motors (Rules 2017 EV2.1)
- Motor controller (Rules 2017 EV2.1)
- Accelerator Pedal Position Sensor (APPS) (if not self-made) (Rules 2017 T10.2)
- Brake system encoder (Rules 2017 EV2.3)
- Battery cells of tractive system accumulators (Rules 2017 EV3.2)
- Accumulator isolation relay (Rules 2017 EV3.6)
- Accumulator management system (if not self-made) (Rules 2017 EV3.7)
- HV disconnect (if not self-made) (Rules 2017 EV4.7)
- HV and LV wiring (Rules 2017 EV4.8)
- Discrete components of pre-charge and discharge circuits (Rules 2017 EV4.12)
- Master switches (Rules 2017 EV5.2)
- Shutdown buttons (Rules 2017 EV5.3)
- Brake-over-travel-switch (Rules 2017 T5.2)
- Fusing (HV, LV, cell fuses) (Rules 2017 EV6.1)
- Chargers (Rules 2017 EV7.1)

The file name has to be the following, without parentheses: “[Car\_no]\_[University name]-[Team Name]\_ESF.pdf”  
Example: E69\_TU\_Mordor-Horde\_of\_Trolls\_ESF.pdf

## A2.6 ELECTRICAL SYSTEM OFFICER(S) QUALIFICATION FORM [EV ONLY]

All EV teams and DV teams with electric traction system must submit an Electrical System Officer(s) Form. Please note the responsibilities of the ESO in A4.8 of the FSG 2018 rules. **BSc or higher academic diploma is also accepted.**

**The number of ESOs are limited to 5 per team.**

A template of this form is supplied on the [www.fseast.eu](http://www.fseast.eu) website.

**Also include the copy of the qualification papers, only single pdf files are accepted.**

The file name has to be the following, without parentheses: “[Car\_no]\_[University name]-[Team Name]\_ESO\_Qualification.pdf”  
Example: E69\_TU\_Mordor-Horde\_of\_Trolls\_ESO\_Qualification.pdf

## A2.7 AUTONOMOUS SYSTEM FORM (ASF) [DV ONLY]

All DV teams must submit an Autonomous System Form.  
A template of this form is supplied on the [www.fseast.eu](http://www.fseast.eu) website.

**The ASF must contain the datasheets and the certifications of the following autonomous system related components:**

- Emergency Brake System
- Service Brake
- Steering System
- All used sensors
- All used processing units

The file name has to be the following, without parentheses: “[Car\_no]\_[University name]-[Team Name]\_ASF.pdf”  
Example: E69\_TU\_Mordor-Horde\_of\_Trolls\_ASF.pdf

## A2.8 AUTONOMOUS SYSTEM RESPONSIBLE(S) QUALIFICATION FORM [DV ONLY]

All DV teams must submit an Autonomous System REsponsible(s) Form. Please note the responsibilities of the ASR in A4.9 of the FSG 2018 rules. **BSc or higher academic diploma is also accepted. The number of ASRs are limited to 5 per team.**  
A template of this form is supplied on the [www.fseast.eu](http://www.fseast.eu) website.

**Also include the copy of the qualification papers, only single pdf files are accepted.**

The file name has to be the following, without parentheses: “[Car\_no]\_[University name]-[Team Name]\_ASR\_Qualification.pdf”  
Example: E69\_TU\_Mordor-Horde\_of\_Trolls\_ASR\_Qualification.pdf

## A2.9 ENGINEERING DESIGN REPORT AND DESIGN SPEC SHEET

All teams must submit the Engineering Design Report and the Design Spec Sheet on the FS East website not later than the above specified deadline. Both documents are required. Once the organizers accepted all of the documents, the submission is considered to be complete.

## A2.10 AUTONOMOUS DESIGN REPORT [DV ONLY]

All DV teams must submit the Autonomous Design Report on the FS East website not later than the above specified deadline. Once the organizers accepted the document, the submission is considered to be complete.

## A2.11 COST REPORT DOCUMENTS

### A2.11.1 ELECTRONIC COPY

The upload of the Cost Report Documents (BOM, CBOM, Cost Explanation File, Supporting Material) to the FS East website must be done according to the Formula Student East Static Rules 2018 not later than the above specified deadline. Once all steps have been completed, the submission of the Cost Report Documents is considered to be complete.

### A2.11.2 WRITTEN COPY

Do not send the Written Copy by post; it must be submitted at the FS East Event Control at the above specified deadline.

## A2.12 BUSINESS PLAN PRESENTATION

### A2.12.1 EXECUTIVE SUMMARY

The Executive Summary must be uploaded on the FS East website not later than the above specified deadline.

### A2.12.2 BUSINESS PLAN PRESENTATION - WRITTEN COPY

The Business Plan Presentation - Written Copy must be submitted at the FS East Event Control at the above specified deadline.

## A2.13 TEAM MEMBER DESIGNATION AND HEALTH INSURANCE CERTIFICATE

Participating team members must be designated prior to the event by submitting the team member designation form.

The form is supplied on the FS East website.

In case the health insurance data of one or more team members is missing or incorrect, FS East will decline the designation of the team member(s) in question. Only designations of team members with complete and correct health insurance information will be accepted. Team members that were declined can be registered again after their health insurance data has been corrected.

## CHANGELOG

Version	Date	Modification	Page
1.0.0	14th March 2018	Initial release	-
1.1.0	26th March 2018	ETC System Description changes	5



Részletek vagy az egész dokumentum felhasználása csakis a Járműmérnökök Egyesülete (korábban MJMFE) előzetes írásos engedélyével lehetséges.

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