Formula Student Czech Republic Handbook 2025

v1.0

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General Info Handbook 2025

This is important always/before you go to FSCZ

Injuries

Minor Injury

Accompany the injured person to the medics or ask Officials (wearing grey t-shirts) - they will handle the situation.

Severe Injury

Call 112 and contact Officials when urgent help is required.

Medical Service on Site

Day	Operating hours
Monday 4. 8.	8:00 – 20:00
Tuesday 5. 8.	8:00 – 20:00
Wednesday 6. 8.	8:00 - 20:00
Thursday 7. 8.	8:00 – 20:00
Friday 8. 8.	8:00 – 20:00
Saturday 9. 8	8:00 – 22:00

Hospital

Nearby Hospital with Emergency (24h).

Hospital Most E. Purkyně 270 434 64 Most

Please report all injury situations to the Officials at Info Point!

Please keep in mind that Officials are **not responsible** for bringing the injured and sick attendees to the hospital nor providing an on-site translation at the hospital.

Fire

Regular Fire

- Call for help before attempting to extinguish a serious fire.
- Ensure your own safety before starting to extinguish.
- Assess the fire and its type.
- Choose the correct extinguisher:
 - Class A: Solid materials of organic origin (wood, textiles, curtains, furniture, plastics).
 - Class B: Flammable liquids and solids.
 - Class C: Gases (natural gas, LPG such as butane and propane).
 - Class D: Metals or powdered metals (water is usually ineffective or dangerous).
- Prepare the fire extinguisher.
- Aim for the base of the fire.
- Extinguish the fire.

Fire of Electric Devices

Electrical fires are not a separate class since electricity is a source that sustains the fire until disconnected.

- Call firefighters through an official with a radio.
- Help people in danger leave the area if it's safe for you.
- Try to extinguish the fire with the correct extinguisher if it's possible and safe.
- Leave the area.
- Wait for firefighters/ambulance and help them locate you (e.g., send someone to the entrance).

Fire of Accumulator

- Everyone must leave the area immediately.
- Inform an Official immediately.
- No team member is allowed to extinguish the fire.
- Team members at a safe distance can remove their belongings and leave.
- Only firefighters or officials are allowed to extinguish the fire.

GDPR

In relation to the event organized by the Formula Student Czech Republic s.r.o. (FSCZ) your personal data, including your name, contact details, and administrative information are collected to facilitate your participation in the event, to implement organizational arrangements, and your entry to the venue.

During the event, you may be photographed or filmed. Having requested your consent by written or oral statement, the FSCZ may disclose, publish, transmit, or quote such material in activities intended for the public.

You can withdraw consent at any time and object to the processing indicating it to the organisers. The FSCZ processes personal data in accordance with Regulation (EU) 2018/1725.

Registration

Competition Dates and Place

FSCZ 2025 will be held from Monday, **August 4th**, until Saturday, **August 9th**, **2025**, at the Polygon Most in Most, Czech Republic.

Event Registration

For the 2025 event, a maximum of 70 slots will be available. Teams in the CV or EV categories with autonomous functions may also register for the Optional DV Cup. These teams can participate in DV dynamic events and present their Autonomous Engineering Design. Teams are eligible to win both their CV/EV category and the Optional DV Cup. Teams without autonomous functions can still compete in the CV/EV categories and remain eligible to win.

Up to 20 of the 70 slots may be allocated for the Optional DV Cup. Teams registering for the Optional DV Cup must also participate in the manual part of the competition, as participation exclusively in the Optional DV Cup is not allowed. The list of Optional DV Cup participants will close on July 11th, based on team rankings in the Registered List and their DV capabilities demonstrated in the Vehicle Status Video.

Event registration will open on January 31st at 15:00 (CET) on <u>portal.fsczech.cz</u>. Registration includes questions from the rules and engineering quiz, which must be answered correctly by the Team Captain (using only their profile). Teams will be placed on the "Pending" and "Waiting" lists based on quiz completion time. To move from "Pending" to "Registered", the registration fee must be paid.

The TOP 3 teams from the 2024 Event and Czech teams have pre-registered slots for 2025 and do not need to take the quiz. These teams must confirm their participation by January 26th via email to registration@fsczech.cz.

Pre-Registered Teams – Winners 2024

- Joanneum Racing Graz
- WHZ Racing Team
- Dynamis PRC
- Cerber Motorsport
- Aristotle Racing Team
- Centaurus Racing Team
- eForce Prague Formula
- Mainfranken Racing e.V.

Pre-Registered Teams – Czech Teams

- CULS Prague Formula Racing
- Formula TU Ostrava
- FS TUL Racing
- TU Brno Racing
- UWB eRacing Team Pilsen

Wildcard Slots

As last year, we are offering "Wild card" slots. These slots will be assigned by Kate based on a Cover Letter, which must be submitted by January 24th via email to registration@fsczech.cz. The Cover Letter should contain at least a few sentences about why you want to participate in FS Czech 2025. The results will be announced on January 26th. If your team is selected, please confirm your interest by January 31st via email to registration@fsczech.cz.

Procedure of Online Event Registration

Only the Team Captain's profile is permitted to complete the registration quiz at <u>portal.fsczech.cz</u>. The role is listed in the profile after login (top right corner).

- 1. If you registered in 2024 and the Team Captain is the same, no further action is required.
- 2. If you registered in 2024 but have a new Team Captain, please pass the role here: <u>portal.fsczech.cz/members</u>.
- 3. If your team appears in the list during profile creation but you don't know who the Team Captain is or are unable to contact them, please reach out to us at <u>registration@fsczech.cz</u>.
- 4. If your team is not listed, create it during profile setup. You will automatically become the Team Captain.

You can participate in the dummy quiz on January 24th at 15:00 (CET) to familiarize yourself with the process. The link will be available under the "Event \rightarrow Registration" tab.

We strongly recommend checking your status in advance and contacting us if you have any questions or issues at <u>registration@fsczech.cz</u>!

- The event registration link will be displayed on January 31st at 12:00 (CET) under the tab Event \rightarrow Registration.
- Pass the registration quiz by answering all questions correctly.
- Once your team is listed among the registered teams in any category, you are eligible to apply for participation in the Optional DV Cup.

Registration Fee

Wire transfer instructions will be emailed by <u>portal.fsczech.cz</u> after the Quiz verification on January 31st around 20:00.

Team on the Pending List

To move from "Pending" to "Registered", the registration fee must be paid. The registration fee covers the entire team, regardless of the number of team members.

The registration fee is **2 150 EUR** (excluding 21% tax) and must be paid by wire transfer and confirmed via email (<u>registration@fsczech.cz</u>) by February 5th to participate in the CV or EV.

Participation in the Optional DV Cup is **500 EUR** (excl. 21% tax) and must be paid by wire transfer and confirmed via email (<u>registration@fsczech.cz</u>) before the 25th of July.

Team on the Waiting List

The registration fee deposit is **1 100 EUR** (excl. 21% tax) and must be paid by wire transfer and confirmed via email (<u>registration@fsczech.cz</u>) by February 5th to participate in the CV or EV.

- Registration Deposit is fully refundable under the following conditions:
 - The team will not move to the Registered List three weeks before the Event.
 - The team will actively withdraw no later than three weeks before the Event.
- Deposit is NOT refundable under the following conditions:
 - The team on the Waiting List rejects the offered position on the Registered List.

FSG Registration

ASF, ESF, ASES, SES, SESA & SE3D and IAD must be submitted through the FSG website. Teams who will participate at FS Czech, but not FSG, also **need to register their team on the FSG website**. Registration for the end of the FSG waiting list is sufficient and no payment to FSG is required.

Refund Policy

- In case the organizer cancels the event on any date before June 1st 2025, registration fees, campsite fees and deposits are 100% refundable.
- In case the organizer cancels the event on any date after June 1st 2025, registration fees, campsite fees and deposits are 70% refundable.
- In case a team cancels their participation for any reason, at any date, registration fees are not refundable.

On-demand Documents

Invitation Letter

If you require an invitation letter, kindly reach out to us before July 3rd at <u>registration@fsczech.cz</u>. Be sure to include the necessary details to be included in the letter. Upon receiving your request, we will send the document to you within one week.

Certificate of Attendance

Confirmation of participation can only be received by team members who participated in the Formula Student Czech Republic 2025 event.

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If you require a certificate of attendance, kindly reach out to us after the event at registration@fsczech.cz. Upon receiving your request, we will send the document to you within one month.

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Event Site Handbook 2025

This is important once you go to FSCZ

On-Site Registration Procedure

On-Site	Registration	Operating	Hours
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Day	Operating hours
Sunday 3. 8.	15:00 - 20:00 (ODV cup only)
Monday 4. 8.	8:00 - 12:00 (ODV cup only) 13:00 - 20:00
Tuesday 5. 8.	8:00 - 12:00

Arrival and Registration at Polygon Most

Upon your arrival at Polygon Most, please proceed to the designated registration area as outlined in the event timetable (TBA). During registration, you will receive all necessary information regarding the camping site, paddock access, event rules, and more.

Documents Preparation

Team Captains must have the following documents ready for verification when it's their turn:

- Driver's licenses (with drivers present)
- Proof of payment for the camping site
- An up-to-date list of attendees
- Signed Affidavit regarding ESOQ from every registered ESO

A full list of required documents will be provided in a later version of the Handbook.

If any documents are missing during on-site registration, you will need to complete them and return them after other teams have completed their registration.

Driver Registration

Driver registration will take place at a specified location, which will be detailed in future Handbook updates.

ESO/ASR Registration

ESO/ASR registration will take place at a specified location, which will be detailed in future Handbook updates.

Deposits

Deposits must be paid in cash. Please note that the nearest ATM or currency exchange office is located in the city of Most, not at the venue.

- Pit: **50 EUR**
 - Refundable after pit check-out on Saturday (16:00 20:00)
- Dynamic area vests: 40 EUR
 - Refundable on Saturday (14:00 20:00)
- Accumulator inspection / charging area vests: **20 EUR**
 - Refundable on Saturday (14:00 20:00)
- Media vest with a badge: 20 EUR
 - Refundable on Saturday (14:00 20:00)
- Data logger (EV/DV ONLY): 300 EUR
 - Refundable till Saturday 20:00

First Access

During registration, please temporarily park all your vehicles in the parking lot near the campsite and wait there until the Team Captain completes the registration and distributes the wristbands and badges. For long-term parking see paragraph "Parking".

Late Arrivals

Late arrivals of team members are allowed, but they must be registered by the Team Captain during opening hours. The Team Captain is responsible for handing over their badge and wristband. This also applies to camp registration.

Camp Registration

Until July 20th, a maximum of 25 camping spots can be reserved per team. Additional spots may be available for reservation later in July, depending on the current availability. Please inform us of your interest in the campsite in advance.

Teams staying at the campsite must pay for all team members either in advance or at the Camp Desk. The cost is **96 EUR** (excl. 12% tax) per person for the entire event. Payment can be made using either cash or a card.

Payments based on pro-forma invoices are preferred. Please request an invoice before the event by contacting <u>registration@fsczech.cz</u>, no later than one week prior to the event.

Teams may access the campsite starting Sunday 3.8. at 15:00. Showers will be available starting Monday at 12:00.

Day	Operating hours
Sunday 3. 8.	15:00 - 20:00
Monday 4. 8.	8:00 – 20:00
Tuesday 5. 8.	8:00 - 12:00

Camp Check-in Availability

If needed, you can request an alternative check-in time.

Latest Check-out: Sunday 10. 8. till 12:00

Parking

- Cars are allowed to park in front of the Paddock for unloading and loading only (max. 2 hours). The vehicle must be designated with the Unload/Load permission card. The Unload/Load permission card is available at the Registration Desk during Registration and is strictly limited to one card per Team. The permission card is transferable between vehicles after exiting the venue.
- Long-term parking is allowed in front of the campsite only for passenger cars and small vans, and it is mostly available for frequently used vehicles. Please note that parking within the campsite itself is limited and should be avoided unless necessary. For safety reasons, cars are not allowed to block the roads in the campsite.
- Long-term parking for trailers and large vehicles will be specified in the next version of the Handbook. It is recommended to park all vehicles that will not be actively used during the event in the designated area.
- To unload/load your team members and supplies (e.g., food) during the event, you can use the PickUp Point (7:50 8:10, 12:00 12:20, 20:50 21:10). Your vehicle must display the PickUp Point permission card, which you can obtain at the Registration Desk during registration. The PickUp Point permission card is strictly limited to one per team.
- Let us know before the event if you plan to bring a truck.

Truck Unloading/Loading

The forklift will be available on-site for truck crate unloading (from Monday 4. 8. 8:00) and loading (until Sunday 10. 8. 12:00). Its load capacity is 1,5 tons. Please note that full

load capacity is limited by the length of the forks and decreases with the position of the crate's COG distance from the tip of the forks. The approximate load capacity of 1m in front of the fork tip is 1 ton. Please plan the distribution of the weight according to that. Your pallet should also be robust enough to withstand manipulation.

If you wish to use the service of our forklift, please arrange a term with us to avoid a long waiting time.

Questions and InfoPoint

If you have questions about registration or the camping site, please visit the InfoPoint instead of joining the registration queue to avoid delays for other teams.

Campsite

Safety

- Do not leave valuables in your tent lock them in the car, if needed.
- Venue/Organizer is not responsible for any stuff lost or stolen and for damage to property and health of campers, despite the fact that camping will be protected. It is recommended not to bring valuable items or, if necessary, lock them in the team's car for safety.
- No animals, weapons, or drugs are allowed. It's strictly prohibited to bring anything that can be classified as dangerous.
- No open flames.
- No pit-bike running. All vehicles must be operated on designated roads with a speed limit of 5 km/h.
- Any operation with the fences is prohibited.
- Leaving or entering the Campsite is possible only with the proper (official red) wristband.
- There will be on-site security at all times.

Consideration

Campers are expected to behave in a manner that is courteous to other campers. The law of the Czech Republic implies a time between 22:00 and 6:00 as nighttime with a noise regulation of 40dB.

Electricity

Camp is equipped with mains electricity of 230V. Please bring an extension cord (EU socket) and use it with caution, especially in bad weather conditions. Be mindful of potential overloading. Under no circumstances should you manipulate with the electric generator, as it may cause damage!

Water

Tap water is safe to drink.

Sanitary Facilities

The campground is equipped with water sinks, electricity, toilets, and showers. Please save water and respect your colleagues.

Refreshment

A restaurant is located at the race track.

Campsite Guests

If the team's guest wants to stay at the campsite, please contact the officials about the procedure.

Vandalism and other Criminal Acts

Due to increasing problems in behavior between teams, we must take the following measures and procedures. In case of vandalism, theft, or other criminal activities the police are always called. If proven guilty, the team will be disqualified from the event, and the university of the team will be notified. We hope that this will contribute to mutual respect between the teams.

Compliance

By accepting the wristband, the camper agrees to follow the Campsite rules. In case of not respecting the rules and instructions of the organizers, the person may be expelled from the camp without a refund of the fee. In the case of more serious violations, the above paragraph is followed (police, etc.).

Paddock

Paddock is open 8:00 – 21:00.

Failure to comply with any of the following instructions may result in a deduction of points, removal of a team member's role, or disqualification.

The following activities are strictly forbidden:

- Running, driving a scooter, cycling, etc., and horseplay are strictly forbidden.
- Welding outside of the designated area.
- Storage of pressurized tanks with volumes larger than 10 litres.
- Grinding using power tools outside of the designated area.
- Storage and handling of fuels (Drain of the fuel or oil system only after agreement with the Pit Marshall).

When using power tools, follow these guidelines:

- Grinding using power tools is allowed in the designated workplace.
- Welding is allowed in the designated workplace under the supervision of the authorized person.
- Welding of the frame and other parts of the assembled vehicle is allowed when the fuel system and all batteries have been removed.

All participants are advised to follow the general workplace safety rules:

- Never distract another person's attention, as you might cause them to be injured. If necessary to get the attention of another person, wait until it can be done safely.
- Where required, you must wear protective equipment, such as goggles, safety glasses, masks, gloves, etc. appropriate to the task.
- Keep your work area clean.
- Do not block access to fire extinguishers.
- Do not operate machines or equipment until you have been properly instructed.
- Do not engage in practices that are inconsistent with common sense and basic safety rules.
- Help to prevent accidents.
- Lift properly, use your leg muscles, not your back muscles. For heavier loads, ask for assistance.
- Do not throw objects.
- Clean up spilled liquid, oil, or grease immediately.

• Place trash and paper in proper containers.

Leaving the Paddock

- Paddock must be left before Saturday 21:00 in the condition it has been received. Its condition will be approved by the Pit Marshall and the team may apply for the deposit withdrawal on Saturday between 16:00 – 20:00 only.
- The team is allowed to take the team tag when leaving the Paddock.

Taking the Car Out of the Paddock

All cars must be accompanied by a wingman, who walks in front of a car and is responsible for a straightforward way ahead.

Working on the Tractive System (EV and Optional DV Cup Based on EV)

- An ESO, accompanied by trained team members who can intervene in case of an emergency, must be present at every activity that involves an active 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 inside the vehicle, the accumulator container needs to be removed from the vehicle.
- Opening the accumulator containers is only permitted in the accumulator inspection and charging area. Opening the accumulator container outside the accumulator inspection and charging area leads to the team's disqualification.
- The tractive system (and R2D) in pits may only be activated in compliance with the following rules:
 - Accumulator inspection must be successfully finished.
 - The car must be jacked up and all driven wheels removed.
 - One team member must be prepared to push an emergency button at any time, and another person must secure the perimeter around the car.
 - Team members who perform a task on the vehicle must use appropriate measurement devices and tools.
 - The tractive system (and R2D) must only be active for the minimum necessary time (the team should estimate the time needed for a task beforehand).
 - Maximum 2 members of the vehicle's team are allowed to stay in the vicinity of a car and at least one of them must be ESO.

- The dedicated pit area around the vehicle must be visibly separated but must not be an obstacle in case of emergency (e.g. warning tape).
- An appropriate extinguisher must be nearby and the instructed person must be ready to use it in case of an emergency.

TS Accumulator Handling Procedures

- When not needed for technical inspection, testing, statics disciplines or racing, the TS Accumulator has to be stored out of the car, especially when pits are closed (21:00 8:00).
- TS Accumulator should be mechanically fixed to the hand cart made for this purpose, fully compliant with the rules.
- Every time in the pits, the Accumulator hand cart should be placed close to the emergency exit way on the edge of the pit space dedicated to the team.
- In the accumulator inspection and charging area, at least one ESO must be present. Member with a media pass must be properly trained and maintain a safe distance from the TS accumulator.
- During the charging procedure and at least one hour after it, the TS Accumulator temperatures have to be continuously monitored by a team's ESO and it can't be left alone.
- If the TS Accumulator's abnormal behavior is observed, team members must inform Officials in the charging area/accumulator inspection area.
- TS Accumulator in the non-regular state will be placed into the dedicated quarantine area, where only one team ESO member can stay and continuously monitor the accumulator state.
- If the team fails the rain-test procedure, the whole car shall be placed in the quarantine area for, at least, one hour with continuous accumulator monitoring by an ESO. The Accumulator inspection is void (the sticker is lost). The team shall remove TSAC from the car under supervision in the quarantine and then immediately come to ACCU tent for the Accumulator re-inspection.
- At least two hours after successfully passing the rain test, the team is not allowed to charge the accumulator.
- For additional questions or in case of emergency, a dedicated charging area marshal (wearing a visible Official vest) will be available in the accumulator technical inspection area (second half of the charging tent).

Course Walk

Access to the course walk is strictly limited to individuals wearing a dynamic vest, including media vests. No other personnel are permitted on the course walk. The only exception to entering the dynamic zone without a dynamic vest is during team photo sessions.

Visitors

Public Days

Visitors can enter the event site between Wednesday (6. 8. 2025) and Saturday (9. 8. 2025).

Tickets

Visitors can buy tickets at the entrance. Payment can be made using either cash or a card. The ticket costs **5 EUR / 100 Kč** and it's valid from Wednesday to Saturday. The ticket has the form of a wristband and is valid as long as the visitor wears it. Kids 12 and under are admitted free of charge. It is not possible to enter the campsite with this ticket.

GDPR

Please be aware that this event will be documented using video and photography!

The material will be used solely to make the event more open and understandable to the public.

In legal terms: By participating in this event, you (the visitor/participant), have given the right for the organizers to send or receive image or video media of yourself, without either party owing special compensation. The organizer is allowed to release this image or video media themselves or forward it to a third party to release for use in audio-visual, print, and online media.

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Competition Info Handbook 2025

This is important once you want to win

Results

Results Publishing

The results will be posted on the results board at the Info Point as soon as they are available. Furthermore, they will be published online on the FS Czech website.

Expected Date & time of result publishing (without top 3 finalists).

Day	Time	Event
Friday	11:00	Engineering Design
Friday	11:00	Business Plan Presentation
Friday	11:00	Cost & Manufacturing
Saturday	7:30	Endurance running order
Saturday	11:00	Acceleration
Saturday	11:00	Skid Pad
Saturday	11:00	Autocross
Sunday	15:00 (online)	Endurance, Fuel Economy, Energy Efficiency

Penalties

Penalized Actions

Action	Action Penalty *
Wearing open shoes in designated areas (outside the campsite area)	10
Power tool usage outside the designated area	25
Welding outside designated area	25
Unsafe or illegal Engine / E-motor running	Team disqualification
Alcohol ** / smoking outside designated areas	100
Driving a scooter in any area	25
Too many members in the Dynamic Area	10
Media Pass holder assisting a team in the Dynamic Area	10
Registering for technical inspection without being ready	10
EV accumulator inside the vehicle during paddock closeout	25
EV vehicle / EV accumulator outside the Event Site	Team disqualification

* If repeatedly violated, the penalty is doubled every time.

** If any team member is tested with an alcohol level higher than 0.0 ‰, they will be immediately disqualified from the rest of the competition. If a second team member is tested with an alcohol level higher than 0.0 ‰, the entire team will be disqualified immediately.

Protests

Procedure

Any team that intends to protest a rule, score, judge's decision, or any other aspect of the competition, must present the issue to FSCzech Officials.

The protest must contain the following:

- Rule interpretation, score, or official action to be protested against
- Explanation of the team's interpretation of the rules regarding the incident
- Additional material supporting the team's claim

Protests must be submitted in a written form by the team captain at the Info Point.

The protesting team must post a 25-point bond to be deducted from their score if the protest is denied.

The decision of the officials regarding any protest is final.

Time Frame

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

Rules Addendum

FSCZ Rules 2025

The Formula Student Czech Republic (FSCZ) competition will comply with the Formula Student Rules 2025. Changes and additions specific to FSCZ are located within this document and supersede the respective sections of the published Formula Student Rules 2025 document.

The Formula Student Czech Republic Handbook 2025 is to be considered part of the rules. In case of any contradiction between this document and Formula Student Rules 2025, here mentioned rules are to be considered valid.

Document Submission

The Event documents are uploaded using <u>portal.fsczech.cz</u> via the section Team Documents or FSG website according to the platform listed in the following table.

Date	Document	Category	Platform
2025-03-14 13:00	Impact Attenuator Data (IAD)	All	FSG website
2025-03-14 13:00	Structural Equivalency 3D Model (SE3D)	All	FSG website
20254-03-14 13:00	Structural Equivalency Spreadsheet (SES)	All	FSG website
2025-03-14 13:00	Accumulator Structural Equivalency Spreadsheet (ASES)	EV	FSG website
2025-03-14 13:00	SES Approval (SESA)	All	FSG website
2025-03-28 13:00	Electrical System Form (ESF)	EV	FSG website
2025-03-28 13:00	Autonomous System Form (ASF)	Optional DV Cup	FSG website
2025-03-28 13:00	Hybrid System Description (HSD)	CV with Hybrid	FSCZ portal
2025-06-06 13:00	Business Plan Pitch Video (BPPV)	All	FSCZ portal
2025-06-06 13:00	Design Spec Sheet (DSS) ¹	All	FSCZ portal
2025-06-06 13:00	Engineering Design Report (EDR)	All	FSCZ portal
2025-06-27 13:00	ASR Qualification (ASRQ) ²	Optional DV Cup	FSCZ portal
2025-06-27 13:00	Electrical System Officer Qualification (ESOQ) ²	EV	FSCZ portal

2025-07-11 13:00	Vehicle Status Video (VSV) ³	All	FSCZ portal
2025-07-18 13:00	Cost Report Documents (CRD) ⁴	All	FSCZ portal
2025-07-18 13:00	Team Member Designation (TMD) ⁵	All	FSCZ portal

1) For DSS documents use the FSG form and export it to the PDF, which uploads to the <u>portal.fsczech.cz</u>.

2) The certificates should be uploaded here: <u>portal.fsczech.cz/uploads</u> (for all your relevant team members in one document), and here in the team member profile for every relevant person separately: <u>portal.fsczech.cz/user-profile</u>

3) Only DV VSV is sufficient for Optional DV Cup participants. No need to upload Manual VSV (Optional DV Cup participants ONLY).

4) The CRD must include the BOM (including CCBOM), the Cost Explanation File and the Supporting Material. To create BOM documents use the FSG tool and export the result to the PDF, which uploads to the <u>portal.fsczech.cz</u>.

5) Each participating Team Member must have a profile on our Portal where they upload their ID card, HIC card, and driver's license (drivers ONLY). Team Captain must assign Team Members to the event here: <u>portal.fsczech.cz/members</u>

Shared Documents With other European FS Events

ASF, ESF, SES, ASES, SESA & SE3D and IAD must be submitted through the FSG website. Teams who will participate at FS Czech, but not FSG, also **need to register their team on the FSG website**. Registration for the end of the FSG waiting list is sufficient and no payment to FSG is required.

FSCZ Procedures and Scoring

The event will be run with three classes – CV (including CV Hybrid), EV, and a separate Optional DV Cup. Static and dynamic (except Optional DV Cup) events will run together but scored separately. Vehicles built according to the FS CV Hybrid rules will be scored together with non-hybrid combustion vehicles.

Category	CV	EV	Optional DV Cup
Business Plan Presentation	75	75	_
Cost and Manufacturing	100	100	_
Engineering Design	150	150	300
Skid Pad	75	75	125
Acceleration	75	75	100
Autocross	100	100	175
Endurance	325	325	_
Trackdrive	_	_	300
Efficiency	100	100	_
Total	1 000	1 000	1000

No autonomous system is required for the CV and EV categories. Teams can remove or leave the components at their discretion but must make this decision **before the technical inspection**.

For Optional DV Cup participants, all autonomous system components **must remain** on the car for the entire event. If the components are removed, the team will receive zero points for all manual disciplines held between the last autonomous run and the current inspection.

FSCZ Specific Addendum to the Formula Student Rules 2025

Below FSCZ specific rules are listed. The listed rules are linked to the mentioned chapter/specific rule in <u>FS-Rules 2025 v1.1.pdf</u> published on <u>formulastudent.de/fsg/rules</u> on the day of the FSCZ handbook release.

CZ-TR-1

FS-Rules 2025 v1.1. Section T 14 & T 15 do apply for teams registered for the Optional DV Cup and will be enforced in technical inspections

CZ-TR-2

FS-Rules 2025 v1.1 A 1.2.6, A 1.2.7, and A 1.2.8 are void. For FS Czech DC is replaced by Optional DV Cup, which is scored separately, and points are not added to the EV or CV category scoring. The registration procedure is described in this handbook's "Registration" section.

CZ-TR-3

FS-Rules 2025 v1.1. Section A 4.4 is applicable for teams registered for the Optional DV Cup.

CZ-TR-4

FS-Rules 2025 v1.1. A 5.6.3 all points marked [DC only] shall be included in the VSV for teams registered for Optional DV Cup.

CZ-TR-5

FS-Rules 2025 v1.1. IN 6 does apply for teams registered for the Optional DV Cup.

CZ-TR-6

FS-Rules 2025 v1.1. S 3.4.7 the Autonomous System is not considered a "system" for EV & CV categories (read: it is not required but may remain in the car).

CZ-TR-7

FS-Rules 2025 v1.1. S 4.6 Autonomous Functionality will not be considered in the CV & EV Engineering Design Event. But will be applicable for teams participating in the Optional DV Cup. See the Static event section for more details

CZ-TR-8

FS-Rules 2025 v1.1. S 4.6 is replaced by CZ-ED-7. See the Static Event section for more details.

CZ-TR-9

FS-Rules 2025 v1.1. Rules marked with [DC Only] or describing driverless procedures will apply for teams participating in the Optional DV Cup.

CZ-TR-10

FS-Rules 2025 v1.1. T 14.2. Due to technical reasons, the official data logger may not capture DV car CAN traffic. Teams have to be able to provide logged data as CSV files. Contents are in the table below.

Signal	Unit	Decimals
Speed_actual	km/h	1
Speed_target	km/h	1
Steering_angle_actual	0	1
Steering_angle_target	0	1
Brake_hydr_actual	%	1
Brake_hydr_target	%	1
Motor_moment_actual	%	1
Motor_moment_target	%	1
Acceleration_longitudinal	m/s2	3
Acceleration_lateral	m/s2	3
Yaw_rate	°/s	2
AS_state	int	0
EBS_state	int	0

AMI_state	int	0
Steering_state	bool	0
Service_brake_state	int	0
Lap_counter	int	0
Cones_count_actual	int	0
Cones_count_all	int	0
RES_Estop	bool	0
RES_GoSignal	bool	0
RES_Radio_Quality	%	0
Other SCS defined in ASF	N/A	N/A

Note: bool data type is expressed as "0" or "1", integers as decimal numbers.

AS_state

Value	Description
1	off
2	ready
3	driving
4	emergency_brake
5	finish

EBS_state

Value	Description
1	unavailable
2	armed
3	activated

AMI_state

Value	Description
1	acceleration
2	skidpad
3	trackdrive
4	braketest
5	inspection
6	autocross

Service_brake_state

Value	Description
1	disengaged
2	engaged
3	available

CZ-TR-11

FS-Rules 2025 v1.1. D1.3.1. For FS Czech 2025 Table 9 defined in Formula Student Rules 2025 is replaced by the following one.

	Runs in Manual Mode	Runs in Autonomous Mode
Acceleration	4	-
DV Acceleration [DC ONLY]	-	4
Autocross	4	-
DV Autocross [DC ONLY]	_	2
Endurance	1	-
Skidpad	4	-
DV Skidpad [DC ONLY]	-	4
Trackdrive [DC ONLY]	-	1

CZ-TR-12

FS-Rules 2025 v1.1. D1.3.1. DV Acceleration and DV Skidpad are considered only for the Optional DV Cup. There will be 4 runs for DV Skidpad and 4 runs for DV Acceleration.

CZ-TR-13

FS-Rules 2025 v1.1 D 1.2 / FS-Rules 2025 v1.1 D 1.3: Each team in the EV or CV category will have 4 runs in Acceleration and Skidpad events, driven by 2 drivers with 2 runs each.

CZ-TR-14

FS-Rules 2025 v1.1. D4.2.3 Staging – The foremost part of the vehicle is staged 10m – 15m in front of the timekeeping line. The final distance will be published before the DV Skidpad event according to the real conditions of the track.

CZ-TR-15

FS-Rules 2025 v1.1. D 4.2.4. The length of the finish line may be shorter than 25 m according to the real conditions of the track. The final distance will be published at the event. Stopping the vehicle using EBS inside the marked exit lane will not result in DQ.

CZ-TR-16

FS-Rules 2025 v1.1 D 7.3: During the FSCzech Endurance event there will be 2 special time windows for teams to run out of order. The morning session will start immediately after the last team from the morning session finishes their run. The afternoon out-of-order runs will be possible only after the final session.

CZ-TR-17

FS-Rules 2025 v1.1 D 1.2.1: For the FSCzech event in total, a minimum of 4 and a maximum of 6 drivers are allowed for each team.

CZ-TR-18

FS-Rules 2025 v1.1 IN12.1.7: Changes in vehicle weight of more than \pm 5 kg compared to the official technical inspection weight, see IN8, results in a 20 point penalty for each kg the tolerance is exceeded by. E.g. a weight difference of \pm 6.2 kg results in a 40 point penalty. Changes in vehicle weight of more than \pm 10 kg compared to the official technical inspection weight, see IN8, results in DQ. The penalty applies to all runs done since the vehicle entered the dynamic area the last time. Formula Student Czech Republic | Handbook 2025 1.0

Static Disciplines Handbook 2025

This is also important once you want to win

Engineering Design

CZ-ED-1: General

Teams submit EDR and DSS according to the Rules. The event will be held live in the Paddock. Judges will be visiting teams in their pits. Teams are advised to be there on time with a car in the race-ready condition. There will always be at least one judge per each judging category. There is no extra presentation for the Optional DV Cup as it was in the previous years, however, scoring will be adjusted and there will be more judges present to cover the AS topics.

CZ-ED-2: Schedule

The Engineering Design Event will take place on Thursday 7. 8. for EV & CV categories and Optional DV Cup participants.

CZ-ED-3: Timeslot Description

Every team has a time slot of 45 minutes reserved for:

- 1. Short presentation of the 2025 season goals by the Team Captain (up to 5 minutes).
- 2. Following discussion with judges in breakout groups according to the list of categories (up to 40 minutes).

CZ-ED-4: Feedback Procedure

FSCzech event will provide two types of feedback.

- 1. Live feedback session with judges will be organized on Thursday.
- 2. Each team will receive a scanned copy of the scoring sheet from each category and overall summary via <u>portal.fsczech.cz</u>.

CZ-ED-5: Replaces S 4.4.3 – Engineering Design Finals

Some teams may be chosen to participate in the design finals to determine the Engineering Design Event winner. The design finals will be held separately from the initial judging and teams will be informed about their participation during the event.

- Design finals will be held on Thursday 7.8.
- Teams invited to the ED finals will be informed at 18:30 on Thursday 7. 8. at the latest.

CZ-ED-6: Replaces S4.6.2 – Maximum Number of Points

The overall Engineering Design event maximum scoring is 150 points for CV&EV and an additional 150 points for Optional DV Cup categories. (The maximum amount of points achievable in Optional DV Cup is therefore 300)

CZ-ED-7: Replaces S4.6.3 – E	D Points Breakdown
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Category	CV/EV	Optional DV Cup			
Overall Vehicle Concept	30	20			
Suspension and Vehicle Dynamics	25	15			
Aerodynamics	25	_			
Tractive System / Powertrain	25	-			
Chassis and Driver Interface	20	_			
LV-Electrics / Electronics / HW / SW / Compute	20	45			
Autonomous functionality	_	70			
Engineering Design Report (EDR)	5	_			
Total	150	150			

Business Plan Presentation

CZ-BP-1: General

Teams submit BPPV according to the Rules. The event will be held live in tents equipped with a beamer or LED screen. Be ready to use VGA and HDMI connections.

CZ-BP-2: Schedule

The Business Plan Presentation event will take place on Tuesday 5. 8. and Wednesday 6. 8. for EV & CV categories.

CZ-BP-3: Timeslot Description

Every team has a time slot of 20 minutes reserved for:

- 1. Business Plan Presentation max 10 minutes including deep dive topic presentation
- 2. Q&A session with judges 10 minutes

CZ-BP-4: Feedback Procedure

TBA

CZ-BP-5: Replaces S2.4.4 – Business Plan Presentation Finals

Finals will take place on Wednesday evening on the main stage. The BPP finals will be held separately from the initial judging and teams will be informed about their participation on Wednesday at 15:00. The number of teams in the finals may vary depending on the number of teams in the category.

The format of the presentation in the finals may not be the same as the format described in CZ-BP-3. The format will be announced together with the finalists.

CZ-BP-6: Deep Dive Topic

TBA

CZ-BP-7: BPP Hard Copy

Each team has to bring with them to the presentation event one hard copy of their presentation so that judges can use it for scoring purposes. Failure to do so can influence the overall team score for BPP and potential participation in BPP finals.

Cost & Manufacturing

CZ-CM-1: General

Teams submit CRD according to the Rules. The event will be held live in the Paddock. Judges will be visiting teams in their pits. Teams are advised to be there on time. Be aware that judges are taking into account only what is on the car, not what should be on it, thus the car should be in ready-to-race condition.

Additionally, in line with the updated German Formula Student rules (S3.3.6), **teams will receive 0 points for the "BOM discussion" if they present documents during the event that are not identical to the version submitted before the competition**. The submitted

documents will be verified using the file download date indicated in the document header and cross-referenced with the version presented at the competition.

If a changelog is applicable, it must be presented at the start of the BOM discussion. The changelog should clearly outline the reasons for any changes made, along with the corresponding dates of these changes. Failure to provide an accurate and comprehensive changelog may result in penalties or point deductions.

CZ-CM-2: Schedule

The Cost & Manufacturing event will take place on Wednesday 6. 8. and Thursday 7. 8. for CV & EV categories.

Every team has a time slot of 45 minutes reserved for:

- 1. Part 1: BOM discussion
- 2. Part 2: Materials and Processes
- 3. Part 3: CCBOM discussion "Cost and Emissions Understanding"

CZ-CM-4: Cost and Emissions Bill of Material

For FSCZ 2025 a CCBOM for the "Steering System" must be submitted.

CZ-CM-5: Real Case Scenario Task

TBA

CZ-CM-6: Replaces S3.8.2 - Cost & Manufacturing Event Scoring

Category	CV/EV
Part 1: BOM discussion	10
Part 2: Materials and Processes	35
Part 3: CCBOM discussion "Cost and Emissions Understanding"	55
Total	100

CZ-CM-7: Replaces S3.8.5 - Cost & Manufacturing Event Scoring Calculation

CZ-CM-7.1. Overview

The scoring process for the Cost & Manufacturing (CM) event is designed to evaluate teams based on their understanding of manufacturing cost principles, innovation, and the ability to justify their decisions effectively. To ensure fairness and consistency, the following method will be applied to calculate scores for finalist and non-finalist teams.

CZ-CM-7.2. Finalist Teams Scoring

Finalist teams are the top-performing teams in the initial evaluation and are invited to present in the Cost & Manufacturing final round. Their scores will be allocated as follows:

- 1st Place: 100 points
- 2nd Place: 97 points
- 3rd Place: 94 points
- 4th Place: 91 points

This allocation reflects the rankings determined by the judges in the final round.

CZ-CM-7.3. Non-Finalist Teams Scoring

For non-finalist teams, scores will be calculated relative to the performance of the finalist teams, using a harmonization process to maintain fairness across all evaluations.

Formula:

Non-finalist team scores will be calculated using the formula:

 $Score = Deviation Coefficient \times \frac{P_{team}}{P_{max}}$

Where:

- P_{team} : Points awarded to the non-finalist team during the evaluation process (post-harmonization).
- P_{max} : The maximum score achieved by any non-finalist team post-harmonization.
- *Deviation Coefficient*: A factor derived from the average deviation between the original and final scores of the finalist teams.

The **Deviation Coefficient** ensures that the non-finalist scores are proportionally adjusted based on the scoring trends of the finalist teams. This provides consistency and fairness across the entire field of competitors.

CZ-CM-8: Feedback Procedure

Each team will receive a digital copy of the scoring sheet with feedback from judges via <u>portal.fsczech.cz</u>.

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Technical Inspection Handbook 2025

Important Points

Procedure

- CV TI contains:
 - Pre-Inspection
 - Mechanical Inspection
 - Vehicle Weighing
 - Tilt Test
 - Noise Test
 - Brake Test
- EV TI contains:
 - Pre-Inspection
 - Accumulator Inspection
 - Mechanical Inspection
 - LV Electrical Inspection
 - HV Electrical Inspection
 - Vehicle Weighing
 - Tilt Test
 - Rain Test
 - Brake Test
- Optional DV Cup TI contains:
 - Pre-Inspection
 - Accumulator Inspection (EV only)
 - Mechanical Inspection
 - LV Electrical Inspection (EV only)
 - HV Electrical Inspection (EV only)
 - Autonomous Systems Inspection
 - Vehicle Weighing
 - Tilt Test
 - Rain Test (EV only)
 - Brake Test
 - EBS test
 - Noise Test (CV only)

Important Notes

- The officials may inspect other points not mentioned on the technical inspection sheet to ensure compliance with the rules.
- Teams are responsible for **confirming** that their vehicle and the required equipment **satisfy** the requirements and restrictions of the **rules before** presenting it for technical **inspection**.
- Vehicles must be presented for technical inspection in **ready-to-race** condition. Does not apply for the EV Accumulator Inspection. The accumulator does not need to be present for mechanical inspection.
- The officials reserve the right to **prohibit** the use of **parts** that could pose a **safety risk** to drivers, track marshals, or the environment.
- The vehicle must maintain all required specifications throughout the competition.
- We strongly advise teams to prepare well for all mechanical and electrical parts know your car! Long phone consultations with your teammates at home will not be accepted.

Inspection Responsible Person

To accelerate the technical inspection process, the team must appoint one team member as the inspection responsible person. [EV ONLY] For electrical inspection and accumulator inspection this has to be an ESO.

The inspection responsible person must be:

- Familiar with the vehicle.
- Able to show compliance of the vehicle with all points mentioned on the technical inspection sheet.
- Able to perform the technical inspection autonomously observed by the officials, when asked.

Should the inspection responsible person be unable to perform one of these requirements, or the vehicle and all **necessary items are not ready**, the technical inspection will be **aborted** and the team will be asked to leave the technical inspection area.

Technical Inspection Management

Schedule and Process

Readiness Check:

• Teams can register for technical inspection only when fully prepared.

Virtual Queue System:

- Registration is done via <u>portal.fsczech.cz</u> or a QR code in the pits.
- Only the Team Captain can access the system.
- No physical queues are allowed.

Procedure:

- The Team Captain submits an online form when the team is ready.
- Teams must stay in their pits until notified.
- Officials will email the Team Captain and escort the team to their inspection slot.

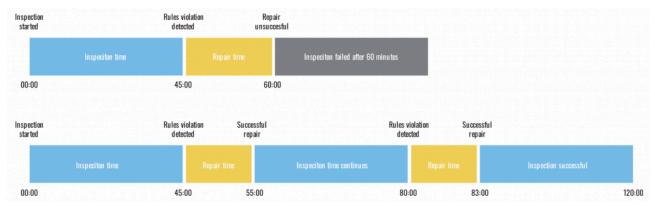
Priority System:

• Teams with fewer attempts have higher priority in the queue.

Inspection Slots:

- 12 slots each for accumulator and EV inspections.
- 5 slots for CV inspections.
- FSE teams may queue for both accumulator and mechanical inspections simultaneously.

How Does It Work



Technical Inspection Rules

Pre-Inspection

- Conducted in the pit, not limited by time.
- Request via portal.fsczech.cz.
- You will be notified by email when scrutineers are heading to your pit.
- **Pre-inspection is mandatory before the brake test** cars without it will not be accepted.

Preparation

• Have all documents, tools, equipment, and the car ready for the inspection.

Inspection Area

- Takes place in the dynamic area.
- Only 4 team members with dynamic passes (including the driver) and 1 with a media pass may accompany the car.
- Media pass holders cannot touch the car or assist in the inspection.

Brake Test Tires

• Teams can use an extra set of tires for brake test, these tires will not be marked and can be used only for brake test.

DV Cup Participants

• For Optional DV Cup participants, all autonomous system components must remain on the car for the entire event.

Electric Cars

• Team has dedicated time for the technical inspection attempts:

Technical inspection	Maximum time for one attempt	Fixing time for one attempt
Accumulator Inspection	2 hours	15 minutes
Electrical Inspection (LV+HV)	2 hours	15 minutes
Mechanical Inspection	75 minutes	15 minutes
Autonomous System Inspection (Optional DV Cup only)	30 minutes	_

- Mandatory fixing (Accumulator Inspection and Electrical Inspection):
 - Up to **15 minutes** from the total attempt time may be used **for fixing** the eventual violations against the rules.
 - If the "Maximum time for one attempt" of total time or 15 minutes of fixing time runs out, the technical inspection attempt ends, and the team must leave the technical inspection slot immediately.
 - If there is a rule violation **team must start with fixing** or **leave** the technical inspection slot **immediately**.
- Technical inspection stages must be performed in the following order: Accumulator inspection, LV inspection, HV inspection, and Autonomous inspection (if applicable). Mechanical inspection can be performed in parallel with Accumulator inspection or separately, but must be finished before LV inspection.
- During time for problem-solving, the technical inspection can continue with other points from the inspection sheet, if possible (cumulative fixing timer is not stopped).

The accumulator inspection and charging area have an extra dedicated pass. This pass allows the team member to enter the accumulator inspection/charging area and the minimal required dynamic area portion (e.g. road) to get there. Entry to other parts of the dynamic area with this pass is prohibited and will be penalized.

Combustion Cars

• Team has dedicated time for the technical inspection attempts:

Technical inspection	Maximum time for one attempt	Mandatory Fixing time for one attempt
Mechanical Inspection	75 minutes	15 minutes
Autonomous System Inspection (Optional DV Cup only)	30 minutes	_

- Fixing (Mechanical Inspection):
 - Up to **15 minutes** from the total attempt time may be used **for fixing** the eventual violations against the rules.
- If the "Maximum time for one attempt" of total time or 15 minutes of fixing time runs out, the technical inspection attempt ends, and the team must leave the technical inspection slot immediately.
- During time for problem-solving, the technical inspection can continue with other points from the inspection sheet, if possible (cumulative fixing timer is not stopped).

Data Logger

Entire data logger has to be put into the TS enclosure. **TS enclosure with data logger** can't be shielded to ensure wireless connectivity.

CAN Interface (TBC)

- Supports automatic baudrate. Any node on the bus has to send any CAN message at least until the data logger starts sending its own periodic message (baud rate lock).
- Supported baud rates: 125 kbit/s, 250 kbit/s, 500 kbit/s, 1Mbit/s
- Logs team generated messages according to FSG 2025 handbook v1.0, and RES messages

Periodic Report Message

- MAY CHANGE!
- Standard ID 0x7F0
- 10 to 50 Hz
- Payload, LSbyte first + LSbit first notation, little endian integers, DLC = 8 bytes
 - TS voltage, unsigned integer 16 bits, 0.01 V step
 - \circ $\,$ TS current, signed integer 16 bits, 0.01 A step $\,$
 - TS power (after moving average D9.4.1), signed integer 16 bits, 5 W step
 - wrapping "up-counter", increments on every message transmitted, unsigned integer 4 bits
 - Memory used, unsigned integer 4 bits
 - "Over-power" flag, set at OP event (D 9.4.1) and remains set for another
 500 ms, bool 1 bit
 - $\circ~$ POR flag, high during first 5 s after boot-up, bool 1 bit
 - o reserved, 6 bits

Message layout	0	1	2	3	4	5	6	7
byte 0	TS_voltage _{0:7}							
byte 1	TS_voltage _{8:15}							
byte 2	TS_current _{0:7}							
byte 3	TS_current _{8:15}							
byte 4	TS_power _{0:7}							
byte 5	TS_power _{8:15}							
byte 6	counter storage_used							
byte 7	OP_detected	powered_resum ed	rese	erved	-			

Drawings

• You can find the datasheet on our website: <u>fsczech.cz/documents-2025</u>

Technical Data

- Wireless data connection (2.4 GHz).
- Low voltage connector (power + CAN)
 - The team is responsible for an appropriate harness with a connector as a counterpart for the data logger.
 - Connector:
 - housing: Molex 33472-4001
 - terminals: Molex 33012-2002
 - pinout: 1 LV+, 2 LV-, 3 CAN-H, 4 CAN-L, (CAN relative to LV-)
- Supply voltage between 9 V and 36 V
- Maximum current draw TBD A
- Bolted high current path terminals. Refer to drawings for dimensions. The team is responsible for appropriate fasteners.
- High voltage sensing terminal: AMPHENOL ANYTEK HB0101800000G. Accepts bare conductor, crimped wire ferrule is recommended. See datasheet for compatible conductor cross-section.

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Other Handbook 2025

Handy Places

Construction Material

Are you looking for metal sheets, tubes, or accessories for your angle grinder?

- Kondor https://en.mapy.cz/s/lozozuzuja
- BauMax <u>https://en.mapy.cz/s/nagupabura</u>
- Obi Most https://en.mapy.cz/s/kapubonafu
- Luma Steel <u>https://en.mapy.cz/s/repuketode</u>

Food and Beverages

Something to eat, ...

- Kaufland https://en.mapy.cz/s/domepupuvu
- Tesco <u>https://en.mapy.cz/s/fogefatoha</u>
- Hypermarket Albert <u>https://en.mapy.cz/s/defonopola</u>
- Lidl <u>https://en.mapy.cz/s/mugekaluhe</u>
- Penny Market https://en.mapy.cz/s/labujacoha

Car Parts

- Auto Kelly <u>https://en.mapy.cz/s/cenadepaga</u> (General store for car parts)
- Prodej olejů <u>https://en.mapy.cz/s/caresususo</u> (Motor and gear oils, greases, lubes, ...)

Electrical Components

Like cable lugs, fuses, etc.

- ielektra.cz https://en.mapy.cz/s/bumumusomo
- ELFETEX https://en.mapy.cz/s/fojejasabu

Computer Parts, Consumer Electronics

Use e-shop first and then use delivery to a local store.

- Alza.cz https://en.mapy.cz/s/pavehukuke
- DATART.cz <u>https://en.mapy.cz/s/fufevasofa</u>