

## 2023/24 FORMULA STUDENT SIM RACE SERIES

Edition: 27<sup>th</sup> September 2023 – V1



1. Introduction .....	2
2. General Rules .....	2
3. Event Format.....	7
4. Race Calendar + Track & Car List.....	10
5. FS Sim Racing Side Challenge .....	12
6. Scoring .....	13
7. Communications.....	14
8. Hardware & Software Requirements.....	14
9. Server Settings .....	16

## 1. INTRODUCTION

Thank you for registering for the Formula Student Sim Race Series 2023/2024. This racing series is separate from the main Formula Student event with no points offered towards the actual Formula Student contest.

This document will cover the following:

- General Rules
- Race Calendar + Track & Car List
- Event Format
- Scoring
- Communications & Practice Server
- Hardware & Software Requirements
- Server Settings

Any amendments to previous versions will be **highlighted**.

## 2. GENERAL RULES

**All times mentioned in this rule book is quoting the UK Time Zone.**

Your primary e-mail contact is [fssimraceseries2023@gmail.com](mailto:fssimraceseries2023@gmail.com). This should be used for:

- Submitting Protests
- Submitting Tyre Compound & Joker selections
- Any other deadline specific tasks (unless otherwise stated)
- General inquiries

This e-mail is monitored by all of the FS Sim Racing administration team, if you use an alternative e-mail address then you risk your e-mail being lost. If your e-mail is with regards to a deadline specific task but the team never received your submission due to use of an alternative e-mail address, we will treat it as “not submitted” and follow the respective stated procedures below.

**Staff List:** All staff members can be contacted through the text channels on the Discord server. DM’s and e-mail’s (for any Staff who has one) should only be used in **exceptional circumstances only**.

- **Event Captain:**
  - i. James (Monty) Montgomery – a.k.a IMechE Sim.Racing.  
[sim.racing@member.imeche.org](mailto:sim.racing@member.imeche.org)
- **Chief Judge:**
  - i. Dan Jones – a.k.a IMechE Chief Judge.  
[chief.judge@member.imeche.org](mailto:chief.judge@member.imeche.org)
- **Support Team:**
  - i. Callum Lowery – a.k.a IMechE Callum Lowery
  - ii. Bilal Mohamed – a.k.a Support Bili
  - iii. James Tatham – a.k.a Support James T (**For Side Challenges only**)
- There will also be additional support staff during each round who you will be able to communicate with through Discord.

**Decisions by Staff:**

The staff will consider and respect the penalty system which is embedded within Assetto Corsa and respective server software (corner cutting, jump starts etc), there will not be any in-race penalty or reporting systems in addition to these. We reserve the right to investigate and penalise any teams with a time penalty, disqualification or grid penalty for their next race if they are caught deliberately causing accidents, gaining an unfair advantage or any other unsporting behaviour.

The time penalty to be applied to a driver is dependent on the severity of the incident. Whilst the stewards endeavour to remain as consistent as possible, teams are reminded that no two incidents are truly the same and we discourage the practice of drawing comparisons to penalties awarded in "similar incidents". Each incident reported will be reviewed on a case-by-case basis, leading typically to a 5 second, 10 second or 25 second time penalty per successfully reported incident, however the stewards reserve the right to apply an alternative penalty, including disqualification or grid penalties for their next race if they deem it to be appropriate.

**Revenge Wrecking:**

Any acts of revenge wrecking will not be tolerated. Any team who is caught committing this act, either at the time of the incident, or through it being brought to the official's attention after the race has finished, will be instantly disqualified from the whole round and banned from the next round they wish to enter.

**Re-Joining the Circuit:**

If a driver re-joins the circuit (typically from but not limited to, leaving the pits, or recovering after an off-track excursion), they are expected to re-join the circuit in a safe manner and in full control of their vehicle.

- Any driver who is caught dangerously re-joining the circuit will be given a 10 second time penalty.
- Any driver who is caught causing an incident\* with another competitor through dangerously re-joining the circuit will be given a 25 second time penalty.

\*An incident does not necessarily mean a crash has been caused, but your actions have still forced another driver into avoiding action/negatively impacted their race.

**Race with Respect:**

We kindly ask competitors to remain respectful and constructive at all times so we can all have an enjoyable time. Abuse towards any other competitor or staff member is not tolerated and your team will take no further part in the current round + and be excluded from the next available round you wish to enter.

**Stewarding & Protesting:**

The deadline to submit protests for the Stewards to review is the day after the race, 23:59 (UK Time). However the organisers reserve the right to adjust this deadline and will give notice accordingly.

Each team will be allocated a “complimentary protest” to use.

- If the protest is successful, the complimentary protest is returned to the Team for future use.
- If the protest is unsuccessful, then any future protests submitted by the team will carry a bond of three (3) championship points.
  - i. The points will be returned to the team for each successful protest outcome.
  - ii. The team will lose championship points for each unsuccessful protest outcome.
- The complimentary protest may only be used for one protest per round. If a team wishes to submit multiple protests, they must commit using the three (3) points bond rule.

**How to Protest:**

Each protest must be submitted via email to [fssimraceseries2023@gmail.com](mailto:fssimraceseries2023@gmail.com) and include:

Team Name	
Team #	
Offending Team	
Offending Team #	
Race 1 or 2	
Server #	
Lap	
Turn	
Description of the incident	

**Protests missing any of this information will be automatically thrown out and you will lose your Complimentary Protest/ three (3) point bond.**

The IMechE Stewarding team will review the protests and submit their decisions before the Final Results are published. The steward’s decision is final and cannot be appealed.

**Protests Channel:**

To ensure consistent application of penalties and help drivers understand the expectations of the organisers, there is a protests channel embedded within the Discord Channel. The channel will be used for Stewards to publish the outcome of any protests received accompanied with a video of the incident and detailed explanation given for their rationale to help educate competitors on good/bad examples of racing etiquette.

## Incorrect GUID's:

Please ensure the GUIDS submitted on your registration forms are correct. Any errors must be reported to the Sim Racing team **ASAP**. Incorrect GUIDS will result in your nominated driver not being able to access the server.

If this is brought to our attention during the event (including during the practice server being live), this will force the organisers to shut off the server to make the necessary changes. There are no guarantees we will be able to make the changes in good time, so your driver risks not being able to participate.

If we can make the changes in time, that affected driver will have to start their race from the back of the grid.

## Aborted Start Procedure:

- Cars will automatically be spawned onto the grid 4 minutes before the race start.
- Drivers may call for an aborted start during this waiting period, up to the point of the starting light UI appearing on the simulator (10 seconds before race start) if they have reasonable grounds to believe that their car has been compromised **due to a technical issue with the server only**.
  - i. e.g. Their car has been spawned in the incorrect grid slot/in the pits/somewhere else on the map or your car has been spawned with damage/penalties already applied.
- Drivers must use the "Aborted Start" channel on Discord to call for an aborted start.
  - i. Aborted start requests will not be accepted if:
    1. They are published elsewhere on Discord
    2. They are submitted once the starting light UI's have appeared on the simulator.
- In the event of an aborted start, the session will be reset and the 4 minute countdown begins once more – the race will remain at its full duration.
- Due to timing constraints, we can only afford to implement **1** aborted start procedure per race.
- All aborted start claims will be reviewed by the server admin team after the round is completed. If any team is found to have falsely claimed an aborted start, they will be disqualified from that race's results.
  - i. False claims are (but not limited to) for example, human error whilst on the grid. Such as, jumping the start due to selecting a gear/coming off the clutch, or joining the grid, then returning to the pit menu and finding that you can no longer spawn to the grid again.

**In the event of a server crashing:**

In the event of the race server crashing, one of the following procedures will take place:

- Server goes down on Lap 1-2.
  - i. A full restart will take place
  
- Server goes down from Lap 2 – 50% race distance.
  - i. A restart with the lap count at 50% distance
  - ii. Grids determined on the race positions from a 1 lap countback from the last completed lap of the leader
  
- Server goes down from 50% - 66% race distance.
  - i. A restart with a lap count of whatever was remaining
  - ii. Grids determined on the race positions from a 1 lap countback from the last completed lap of the leader
  
- Server goes down from 66% race distance or more.
  - i. Race is complete
  - ii. Results determined on a 1 lap countback from the last completed lap of the leader

To confirm, this will only come into action in the event of a server crashing. No restarts will take place due to a racing incident e.g., 1<sup>st</sup> lap pile up.

### 3. EVENT FORMAT

#### Driver Registration:

Please fill out the Entry Form document and submit to [fssimraceseries2023@gmail.com](mailto:fssimraceseries2023@gmail.com).

- Only active members of your Formula Student team may participate in this series, of which 2 must be present for each round.
  - i. If you can only field 1 driver for that round, please refer to the One Driver Entries section below.
- Teams must submit an entry form with all details filled out, we will use this information to produce a roster list throughout the season to identify each driver in your team e.g. "Driver A, B" etc...
  - i. If a team wishes to modify their Roster List (either to include, or remove drivers), this must be made before the Practice Server is closed for changes to be made for that round. Any modifications after this deadline, will see your requested changes come into place for the subsequent round afterwards.

#### One Driver Entries:

- In the event of a team only being able to enter one driver for that round, your sole driver will be allowed to participate in both races, however they will face the following penalties:
  - i. Start from the back of the grid in both races
    1. You will still have the option to participate in qualifying for in the event of multiple servers being run for a round, we will use your qualifying time to determine which server you will be placed at the back of the grid for.
      - a. The team will be allowed to keep the bonus point on offer for fastest time in qualifying.
    2. In the event of multiple single driver entries, the team with the highest place in the championship will start rear-most on the grid.
  - ii. The points you earned in both races of that specific round will be capped by a % factor. The % is determined on how many times your team has entered a one driver team – the higher the count, the harsher this factor becomes.
    1. Any bonus points will not be affected by the % factor.

One Driver Entry Count	1	2	3	4	5	6	7
% of points earned for that round	100	95	85	70	55	40	20

### Race Format:

The FS Sim Race Series will be held monthly using an online server to connect all competitors from your location

- The Series will consist of seven (7) rounds
  - i. Each round will last approximately 2.5 – 3 hours in total
- Race formats will be two (2) sprint races
  - i. Race 1 = 25 minutes
  - ii. Mandatory driver change between Race 1 > 2
    - a. Please refer to the Driver Registration section in the event of one driver entries
  - iii. Race 2 = 25 minutes
- The races will be split into 3 tiers and your qualifying position will determine whether you are entered into:
  - i. Top Tier (Top 20 qualifiers)
  - ii. Middle Tier (21<sup>st</sup> – 36<sup>th</sup> position)
  - iii. Bottom Tier (The remainder of the field)
  - iv. The servers will be scaled accordingly if entry numbers were to change for a specific round.
- Qualifying
  - i. Qualifying will be held on the night of the event in two separate sessions, where each session is split between Server A, B & C.
  - ii. Qualifying 1A, 1B & 1C will determine the grids for Race 1
  - iii. Qualifying 2A, 2B & 2C will determine the grid for Race 2
  - iv. **Your driver must enter the race they have qualified for.**
  - v. Weather conditions will be equal and unchangeable in every qualifying session.
- Practice/Prerequisite
  - i. The Practice Server will be launched the day after the previous round has finished and will close at 23:59 on the Thursday before the Round (see Race Calendar in Section 4 for details).
  - ii. It is a prerequisite for any driver who is competing in that round to complete at least 5 consecutive incident free laps within 107% of the top 5 fastest teams (averaged) in the practice server.
    - 1. The prerequisite must be completed before the practice server closes. No laps will be accepted afterwards. Any driver who has not completed this, will not be allowed to race in that round for your team.
    - 2. Weather conditions will be constant while the Practice Server is Live.



**From Round 1 – Round 6:**

- The organisers will announce the Car & Track combinations in two batches
  - i. Round 1 > Round 3
  - ii. Round 4 > Round 7
- A +5% car mass will be implemented throughout this period. Teams will have the opportunity to run a joker (i.e. where this mass is reduced to the original weight of the car) one (1) time in each batch announced.
  - i. You must **DECLARE** your intention to run the “joker” car mass before the practice server has closed.
  - ii. Unused “jokers” will not be implemented by the organiser. You **MUST** declare your intention to use it for it to be enabled.
- Track conditions will not be fixed during an event and so weather forecasts will be provided during the Car & Track batch announcements.
  - i. Like in real-life, these forecasts are not 100% accurate, but will still give a representable expectation as to what conditions you should expect for each Round.
  - ii. Weather will be controlled through a DLC app, please refer to section 7 “Hardware & Software requirements” for more information.

**Round 7:**

- Will run to a separate format. A supplementary regulations book will be distributed to all teams closer to the event.

**Non-Championship:**

- To be used as a “test race” for the organisers & teams. We will run the event to the stated rules but the results will not count towards the total points. Teams will have freedom of setup choice however no jokers can be used.

## 4. RACE CALENDAR + TRACK & CAR LIST

The FS Sim Race Series will consist of 9 events, held on a monthly basis. In the event of a round consisting multiple car choices, teams must declare their chosen vehicle before the Practice Server Closes.

Round #	Race Date	Practice Server Opens (00:00 UK Time)	Practice Server Closes (23:59 UK Time)
Non-Champ	21/10/2023	5/10/2023	19/10/2023
1	11/11/2023	22/10/2023	09/11/2023
2	09/12/2023	12/11/2023	07/12/2023
3	20/1/2024	10/12/2023	18/1/2024
4	17/2/2024	21/1/2024	15/2/2024
5	16/3/2024	18/2/2024	14/3/2024
6	13/4/2024	17/3/2024	11/4/2024
7	Formula Student 2024	TBC	TBC

### Race Server Schedule

Time (UK Time)	Event	Notes
17:45	Free Practice	<i>Not a requirement to attend full session, we strongly recommend logging in to the server at least 10 minutes before the Driver's Briefing begins.</i>
18:15	Drivers Briefing	
18:25	Qualifying 1	<i>10 Minute Session.</i>
18:35	Grid Prep 1	<i>Preparing the Grids</i>
18:50	Warmup 1	<i>Server moves into 5 Minute warmup session for drivers to conduct final setup checks before grid is formed for Race 1.</i>
18:55	Race 1	<i>25 Minute Races, grids determined by Qualifying 1.</i>
19:20	Interlude	<i>Driver 1 disconnects and prepare Driver 2 for next server launch. (Winner of Race 1 Top-Tier to be interviewed on live stream)</i>
19:30	Qualifying 2	<i>10 Minute Session.</i>
19:40	Grid Prep 2	<i>Preparing the Grids</i>
19:55	Warmup 2	<i>Server is relaunched now 1 driver entries have been repositioned. 5 Minute session for drivers to conduct final setup checks before grid is formed for Race 2.</i>
20:00	Race 2	<i>25 Minute Race, grids determined by Qualifying 2.</i>
20:25	Post Race Interview	<i>The winning driver of the Top-Tier Server for Race 2 will be interviewed on live stream.</i>
<i>Straight After Interviews</i>	Post Race De-Brief	

## Track + Car Combinations

The event will be run on Assetto Corsa, some DLC's will need to be purchased if you do not have the Ultimate edition. If any additional **downloaded content** is needed, we will supply a cloud-drive link.

Below is a list of cars and tracks expected to appear during the contest. Please do not modify any of the car or track files, as you will not be able to join the servers if you do.

<p>Cars:</p> <p>Mazda MX-5 Cup</p> <p><b>RSS 3</b></p> <p>Audi TT Cup</p> <p>GT3+</p> <p><b>Formula Ford F1600</b></p> <p><b>ACL GTR</b></p>	<p>Tracks:</p> <p><b>Donington National</b></p> <p><b>VIR North</b></p> <p>Brands Hatch</p> <p><b>Hungaroring</b></p> <p><b>Kyalami</b></p> <p><b>Interlagos</b></p>
--	--

## 5. FS SIM RACING ENGINEERING CHALLENGE

### Concept

*(Full details can be found in the Engineering Challenge supplementary regulations, however to bring to your attention now)*

- The Engineering Challenges will be hosted in between each round of the Sim Racing Series - championship points will be rewarded to the top participants (see section 6, scoring for reference). The purpose of these challenges is to test, and reward your team's engineering skills with regards to understanding Vehicle Dynamics, not just your driving/hotlap ability.
- Each challenge will be published in between rounds and will specify the Vehicle Dynamic element you will be focusing on. Circuit and car choices will be consistent with the upcoming round, however weather conditions may differ from what is forecasted for the actual race.
- You will use the practice servers for publishing your lap time, however please refer to the deadlines within the supplementary regulations to ensure you have completed this in good time.
- The driver roster rule will be relaxed for the Engineering Challenges, however you may only call upon the assistance of colleagues within your Formula Student Team to compete.
  - o Any Team Member taking part in the Engineering Challenge Round, but not for the Sim Racing Round must include "EC" at the start of their name. Failure to do this will result in their lap times not being counted towards the challenge.

## 6. SCORING

The FS Sim Racing Series is a stand-alone event with zero points contribution to the live Formula Student event. A championship table will be formed where points can be scored for both races in each round.

POSITION	Top Tier	Mid Tier	Bottom Tier
1	50	25	12
2	45	22	9
3	42	20	7
4	40	18	5
5	38	16	4
6	36	14	3
7	34	12	2
8	32	10	1
9	30	8	0
10	28	6	0
11	26	5	0
12	24	4	0
13	22	3	0
14	20	2	0
15	19	1	0
16	18	0	0
17	17	0	0
18	16	0	0
19	15	0	0
20	14	0	0

**Bonus Points Available:**

- Fastest Lap per Race (Each Tier) = 1 Point
- Highest Climb per Race (Each Tier) = 1 Point
- Qualifying 1 fastest time = 1 Point
- Qualifying 2 fastest time = 1 Point

**Disclaimer:**

- Best 6 out of 7 results will count towards your team's final position in the Series.
- A DNF/non-classified finish will result in 0 points for that race.
- You must complete 75% race distance to be classified for points.

**Side Challenges:**

- Please refer to Side Challenge supplementary regulations on how to score points.
- **These cannot be used towards your drop score.**

## 7. COMMUNICATIONS

All communications will be sent via e-mail. We will use the e-mail address you nominated in your registration form. **Please contact the Sim Racing Team if this needs to be changed.**

### Discord:

In addition to e-mails, we will also use a Discord channel during each event. We strongly encourage every driver to join the server during the event as this will be used for instant communication and messaging. A copy of all uploaded Rules + Regulations will be available for downloading as well.


Discord Server details - <https://discord.gg/Z6Qtqd8Pat>

## 8. HARDWARE & SOFTWARE REQUIREMENTS

### Racing Simulation:

Assetto Corsa, all DLC's will need to be purchased – the game + combined bundle is available on Steam for ~£60 per account.

**PLEASE NOTE:** Steam are currently running a special offer (50% discount) on their “Ultimate edition” bundle for a limited time, this will give you access to all Kunos DLC that we may use.



**ASSETTO CORSA ULTIMATE EDITION**

Buy Assetto Corsa Ultimate Edition

-50% £30.53 [Purchase as a gift](#)

**ABOUT THIS BUNDLE**

Assetto Corsa: Ultimate Edition is the most complete version of the universally acclaimed driving simulator, offering all the DLC & updates ever released for the game (Dream Pack 1-2-3, Trip13Pack, Porsche Pack 1-2-3, Red Pack, Ready To Race, Japanese Pack and Ferrari 70th Anniversary DLCs).

Choose from 178 meticulously detailed vehicles - their handling and performance modeling taken from real track data & telemetry - and 19 legendary circuits (including Spa Francorchamps, Nürburgring-Nordschleife, Laguna Seca & many others) with 40 different track configurations, recreated through laser-scan to deliver the highest accuracy possible. Enjoy all the race modes in Single player or compete with friends in online multiplayer. Customize the driving experience by adjusting the handling and race set-up to match personal racing styles. With its advanced physics engine including features and aspects of real cars, Assetto Corsa: Ultimate Edition offers a level of realism never experienced before.

[https://store.steampowered.com/bundle/6998/Assetto\\_Corsa\\_Ultimate\\_Edition/](https://store.steampowered.com/bundle/6998/Assetto_Corsa_Ultimate_Edition/)

## Weather DLC:

The server will be running CSL and Sol Apps –

<https://www.racedepartment.com/downloads/sol.24914/> - follow every instruction in this link to activate the mods.

## Important Note:

The server is set to require a version of CSP which **includes** the Rain FX. This can only be activated by installing a patreoned version of the mod (<https://www.patreon.com/x4fab/posts>), this can be subscribed to for as little as \$1 per month.

## The server will be configured to run:

- **CSP patch version 2501**
  - o WARNING: All patreon patch versions do not appear on Content Manager, you must download from the specific patreon page and install manually.
- **Once the patch is installed:** On Content Manager, set the CSP setting to “0.1.80-preview346”
- **SOL:** Minimum requirement of version 2.2.9.

As mentioned in Section 4, the event will be running customised, free content such as race circuits and data logging telemetry. **We will supply you with a cloud-drive** link in a future document release to download this free content – you will not be able to take part in the event without these files.

Servers must be accessed through Content Manager – this is free to [download](#), please sync your Steam accounts (for each registered driver) to the app.

**HARDWARE REQUIREMENTS** – Teams are recommended to enter the series using a steering wheel controller. Your computer must be compatible to run Assetto Corsa. According to Steam, the following requirements are:

SYSTEM REQUIREMENTS	
<b>MINIMUM:</b>	<b>RECOMMENDED:</b>
OS: Windows 7 Sp1 - 8 - 8.1 - 10	OS: Windows 7 Sp1 - 8 - 8.1 - 10
Processor: AMD Athlon X2 2.8 GHZ, Intel Core 2 Duo 2.4 GHZ	Processor: AMD Six-Core CPU, Intel Quad-Core CPU
Memory: 2 GB RAM	Memory: 6 GB RAM
Graphics: DirectX 10.1 (e.g. AMD Radeon HD 6450, Nvidia GeForce GT 460)	Graphics: DirectX 11 (e.g. AMD Radeon 290x, Nvidia GeForce GTX 970)
DirectX: Version 11	DirectX: Version 11
Network: Broadband Internet connection	Network: Broadband Internet connection
Storage: 15 GB available space	Storage: 30 GB available space
Sound Card: Integrated	Sound Card: Integrated

## 9. SERVER SETTINGS

### Server Login Details:

Server login details and passwords can be found on the Discord server under #race-server-info. As we run multiple servers, we will communicate which server you will need to be in for each round.

### “Fun Races”:

On non-race weeks, the practice server will be opened on Wednesday evenings for short races. These will use randomised combinations not related to the Sim Racing Series, all combinations will be stock content.

### Server Settings:

- Fuel Rate x4
- Tyre Wear x4
- Blankets on
- Flags on
- Cut Penalty Off
- ABS/TC – factory default, optional turn off
- Jump Start – Drive Through
- Standing Start
- 50% Damage
- Mid Race Join - Disabled