

SPONSORSHIP NEWSLETTER

FEB 2021



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STUDENT

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BUSINESS

PETER GATELY

Shortly before the end-of-semester break, UCDFS was presented with a in-depth consultancy report from the **Irish Student Consulting Group (ISCG)**, detailing thoroughly-researched recommendations for the team's marketing, branding, and sponsorship strategies. Implementation of suggestions has already begun and will continue throughout this semester.

We have been working hard to prepare our six-week course on '**Energy & Electric Vehicles**' for the Johnson & Johnson STEM Academy. Due to launch in its pilot school shortly, our project team is fully engaged to make sure each class is as entertaining and educational as it can be.

Our Events Team have been putting in a lot of work into plans for UCD Formula Student's new **Speaker Series**. The venture involves talks and workshops from both sponsors and key players in the world of motorsport. Our first event was staged as part of our **DriveFemale** initiative - a panel interview with Nicole Drought, Ireland's top female racing driver, and Nicci Daly, founder of Formula Female and former race engineer at Indy 500's Juncos Racing. You can catch the full recording on our Youtube channel, where you can also find short videos covering the background of UCDFS and our aims.

We are delighted to announce we have welcomed **four new sponsors** onboard. Davy Group have agreed to join us at Community Level for €1,500. WorkHuman have come onboard at an Enterprise Level for €5,000, and Bender has joined us as a Community Level sponsor with the use of their ISOMETER® IR155-3204 Insulation Monitoring Device, valued at €1600. CALT Dynamics have also offered the team €1,000 of valuable store credit.



**PETER
GATELY**
BUSINESS TEAM CAPTAIN



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BUSINESS MARKETING

We're nearly at the halfway point of the semester that should see the bulk of the Business Team's day-to-day work wrap up. While we will continue meeting regular goals such as working on gaining new sponsors, marketing, member base development and branding etc. throughout the summer, as we near the end of the college year, focus will begin to switch towards **competition preparation**.

While everything we do at present is done with Silverstone in mind to some degree, the static events that the Business team are responsible for will take priority. At the competition, the money that we've raised, outreach we've done, the brand we've curated for the team and the like, all matter in how they prepare us for our 10-minute presentation to judges.



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MECHANICAL

MATTHEW MCCORMACK

BRAKING

The Braking Team have located plasma-cutting specialists for parts of the brake system. They are currently finalising and sending the tolerances and dimensions of all parts to be plasma cut to CALT Dynamics, and expect these to be completed in the coming weeks.

The team is adapting and finalising the pedal box design for the new chassis, and are due to perform FEA analysis on it shortly.

They are also developing a manufacturing manual, and collaborating with the Elec time in finalising the braking system – brake travel, line sensors and mounting.

Moreover, there are ongoing discussions about incorporating a regen system into the braking system.

The main braking parts have arrived.

POWERTRAIN

The Powertrain Team is investigating the chain tensioner and motor sprocket.

They're currently developing a list of manufacturing processes and they have ordered the radiators and water pump.

And lastly, the motor mount has arrived.



**MATTHEW
MCCORMACK**

MECHANICAL TEAM CAPTAIN



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STEERING

The Steering Team is delighted to announce that the steering rack has arrived and they are now looking into how best to mount it in the chassis.

They have ordered the bevel gear, various tubes and rods, and the quick release; modeled the steering arm and tie rod; and will arrange for the rack mounts and steering arm to be machined from aluminium.

SUSPENSION

The Suspension Team have modelled the new a-arms on SolidWorks, assembled all modelled suspension components, and can now design the chassis mounts.

Using OptimumK, they are also completing various calculations, based off of the multitude of forces produced from different driving scenarios. These results will help ensure all components are properly dimensioned.

ERGONOMICS

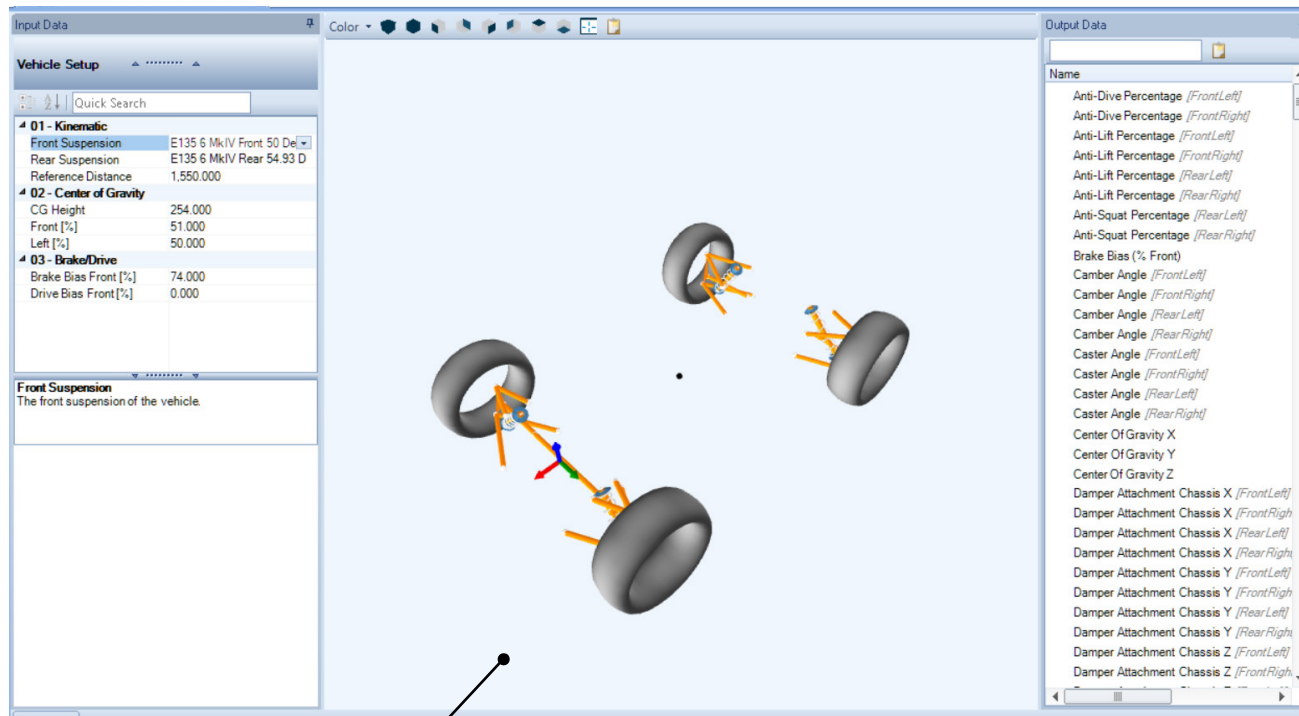
The Ergonomics Team are finalising the cockpit dimensions and are analysing firewalls.

They have helped finalise the brake pedal placement and they've modified the steering wheel angle in SolidWork.

The team have acquired the seat kit and will make a test seat over the coming week. All going well, custom seats can be made for every driver.



STEERING & SUSPENSION



SUSPENSION

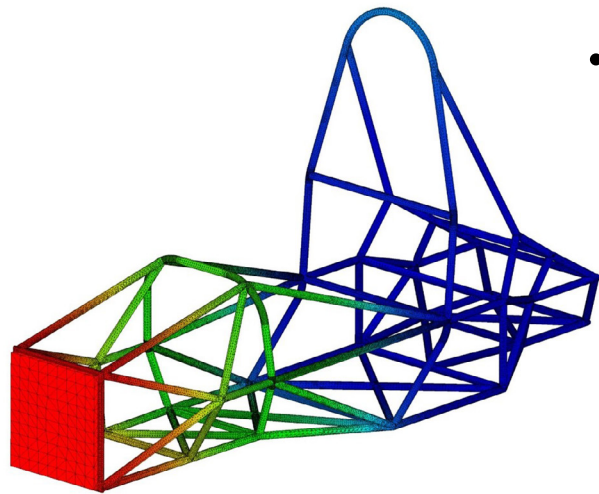
Optimum K visualisation

CHASSIS

The Chassis Team have completed the SES manual analysis and have performed some modifications to satisfy Suspension.

They have also dimensionally modified their setup which may affect Suspension and Powertrain limits.

They are researching jigs and options for manufacturers regarding construction of the chassis.



CHASSIS
computational mesh

ELECTRICAL

EOIN BLEAKLEY

The Electrical Team attended an online presentation offered by the Institution of Mechanical Engineers on the topic of electric vehicle safety. The presentation contained information about possible electrical hazards and methods of preventing these hazards from occurring.

This has given the team some ideas on how to improve the current safety measures and will be important to keep in mind during prototyping and construction of the electrical systems.

In other news, the team welcomed two new members!

BATTERY

The low-voltage battery pack designs were finalised, and the required parts ordered. The next step is to ensure the optimal configuration of battery support elements, such as the BMS.

Some serious progress was also made in the high-voltage battery department, such as running stress/strain simulations on the accumulator enclosure and further developing the assembly process.

The battery team continued using Solidworks to run thermal and airflow simulations on the battery enclosure. These simulations will help the team decide how best to approach designing the vents, which will involve striking a balance between cooling and the strength/waterproofness of the enclosure.



**EOIN
BLEAKLEY**
**ELECTRICAL TEAM
VICE-CAPTAIN**



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WIRE HARNESS & DISPLAYS

The design and pricing of the dashboard and steering display is expected to be complete soon. The team is now focusing on designing the PCBs for the dashboard, starting with the steering wheel PCB.

Last semester, EPLAN came onboard as a sponsor and gave access to their wire harness software which offered a lot of new capabilities.

The Wiring Team spent most of the week sourcing suitable wires and connectors to be used in putting the harness together. They've also been analysing different methods of harness construction.

At the same time, the Dashboard Team have begun work on creating the touch interface for the steering wheel screen, to display car metrics such as accumulator temperature to the driver in real time.

ENCLOSURES

Work continued on the High Voltage Enclosure, with this week's focus being on deciding how to securely mount it on the chassis while also making it accessible to the team.

Consideration was also given to the connection between the HVE and motor, and the team further developed the CAD designs associated with these changes.

Furthermore, the team has secured access to the high-voltage labs in UCD, following a meeting with UCD Faculty and the head lab technician.



CLOSING WORD

ROBERT BURKE

January and February have seen our biggest push yet. As I'm sure many of you have encountered, ordering in from the UK is quite a headache at the moment, but we finally have some tangible components into our hands!

We are now well placed to begin the most fulfilling and busiest part of the project - seeing our designs transform into the car we will bring to Silverstone. For those of us that have previously experienced the competition at Silverstone, we're counting the days until we can go back.

To close, we want to thank you, the sponsors, for your continued support. We can't reiterate this enough, but without you, this project would not be possible. We're overwhelmingly grateful.



**ROBERT
BURKE**

UCDFS TEAM CAPTAIN



Never think that success is down to your own performance alone.

The flowers of victory belong in many vases.

MICHAEL SCHUMACHER

