XRACING NEWSLETTER

TOM'S UPDATE

Last term saw XRacing lay the foundations for the 2021/22 season: we secured our funding for the year, we drew up designs and began buying in the parts needed for XR08. We have also secured a place at the competition this July.
Term 2 is where we shift up a gear (or three); it is set to be the one where the bulk of the manufacturing will be carried out for XR08. Within a few weeks, we hope to have a constant stream of members in the workshop carrying out manufacturing in parallel.

This is a fantastic chance to learn about manufacturing (and by extension Design for Manufacture) in the best way possible: by getting your hands dirty and doing it yourself! If you haven't been involved in the team up to now, manufacturing is a great place to start.

If you are interested in getting into the workshop and manufacturing but have not done a workshop induction as part of your course (it now takes place in 2nd year engineering by default) please let me know so we can arrange inductions with the workshop staff.

The workshop has now fully reopened, so I hope to see many of you in there.

Let's build a car!

IN THIS NEWSLETTER

- Images from last term
- Updates from the sub-teams

CHASSIS SUB-TEAM

We have been working to adapt an EV Chassis design originally made as part of a 4th year project. As we plan to manufacture this year's chassis ourselves, we are getting the team up to standard on CAD software for them to design the jig required to hold the chassis members together throughout the welding process.

SUSPENSION SUB-TEAM

We have been working on familiarising the new team with changing the suspension settings such as tow, camber and caster. We have also made an apparatus to measure and work out the exact force to compression rate of the air shocks. In addition to this, 2 4th year projects and 1 3rd year project are designing the new suspension geometry, wheel hubs and anti-roll bars.

VEHICLE CONTROLS SUB-TEAM

This term has been a determined design sprint. We have been working on a brand-new steering wheel with improved ergonomics, sturdier frame, and supreme usability. On top of this we are working on a 1-piece bucket seat made out of carbon fibre, this will secure the driver firmly into the car for safety and comfort. The pedal box this year is being simplified in order to improve it on all bases including weight, strength and complexity.

IC POWERTRAIN SUB-TEAM

Recently the team has been tackling the mammoth task of trying the start the Triumph Engine. After much deliberation we have made progress but alas the engine has not breathed to life. We will continue with our effort until next week where we will inevitably decide to use the Honda.

In other news, Team members have been given a variety of small manufacturing and research tasks, such as producing lock wire training props and ecu discussions.

LV SYSTEMS SUB-TEAM

The sub-team has been mainly working on the dashboard and figuring out a way of getting vehicle data from the ECU onto a digital display. This has been achieved using a CAN controller, Arduino and Raspberry Pi to process the data and display it using a visual programming tool called Node-RED. Various other projects have been given to members involving PCB design of various components such as a shift light and brake light switch circuit.

PUBLICITY SUB-TEAM

We've been focusing on getting the year up and running, working on the website, and on this newsletter. We've also created a linktree for our social medias where you can find all of our handles in one place! We're super excited to keep building XRacing's online presence and audience!

FINANCE SUB-TEAM

After a successful alumni fund application, we hope to increase our yearly budget by contacting known Formula Student sponsors as well as apply for the IMECHE grant.

BODYWORK SUB-TEAM

We have been running inductions for the sub-team members to learn the carbon/glass fibre lay-up process, with most of the team having completed this.

HERE'S TO AN EXCITING 2022!

XRACING