

INTERVIEW

PHOTOS BY CHRIS SANT FOURNIER

A STUDY IN SPEED

Is the University of Malta Racing Team up to the Formula SAE challenge, asks **Andrea Faye Christians.**

A group of Maltese university students from various faculties are currently collaborating together to participate in the Formula SAE. For this international challenge, teams from universities all over the world have been given the challenge of designing, building and ultimately racing their own Formula-style car. For the competition – which is set to take place at Silverstone circuit in July 2014 – the teams will attempt to score a maximum of 1,000 points in a series of static and dynamic events staged over three days.

The main challenge is to create a financially viable car within precise specifications for engine and power. The gauntlet has been thrown and it is certainly an ambitious one but the students that form the University of Malta Racing Team are confident they are up to it.

In total there are 150 students involved in some way or another. A core group of 35 are directly involved in designing and building the vehicle and in running the organisation. From these a further eight core leaders have been selected and are charged with the task of leading a particular section or of undertaking other roles such as secretary, treasurer and PRO.

The work on the vehicle is divided into four principal categories – engine, power train, fabrication and chassis. The specifications for each section are precise. The engine has to be an inline four-cylinder motorcycle engine with a maximum displacement of 610cc or 0.61 – the University team has already selected a Honda engine.

The team also has the task to design the intake and exhaust system – for this, a material that is lightweight, able to withstand high temperatures and isn't too expensive has to be chosen.

Another specification set by the competition is a restricted air intake – this will obviously have an impact on the power output of the engine. As a result the team must strive to design a system with as few imperfections as possible.

When it comes to the chassis the rules dictate that certain parts have to be covered by a body, such as round the front, but that the car must be open-wheeled. Despite the added weight there are aerodynamic advantages to be gained from this but the fabrication material must fulfil the rigidity and weight criteria while also being financially viable – fibre-glass and carbon fibre are the most likely candidates. Again the fabrication team must liaise closely with other core departments to work

towards an optimum result and also have the added task of actually building a workshop. Fortunately, the workshop is already being built and the University of Malta is providing all the necessary tools.

The drive train system mainly consists of the differential, gearbox and shifting system. Here the differential will need to maximise the agility of the car as the test track has many short and tight bends. When it comes to the gearbox, the choice is between a lever and a paddle system. Again, the best compromise between cost, weight and efficiency for the driver must be sought.

For the chassis, a balance between weight, rigidity, strength and affordability is needed and a material called chromoly has emerged as the best contender to use for construction. The 13-inch wheels will have top quality tyres while the car will have an independent suspension system on each wheel – this should improve handling on tight bends.

One thing is for sure – the vehicle will be put through its paces in everything from presentation and costs to performance in various environments that include autocross and endurance.



"WE AIM TO CREATE A KNOWLEDGE BANK THAT FUTURE STUDENTS WILL HOPEFULLY BUILD ON YEAR AFTER YEAR"



have some sponsors on board but we need more."

Leonard Agius, who is reading for a business degree, handles the administration and public relations of the project. "We have various sponsorship packages available and are confident we will get there," he says.

"The more backing we get, the better it is as this project can definitely put Malta on the map for the future."

A number of foreign companies have already shown interest – this include Ferrari sponsor SKF as well as a number of local companies including Cycle World, Print It and Storm Design. The Faculty of Engineering also has made its facilities available to the team. A number of local enthusiasts have also given the team their support and shared their knowledge.

What impresses me most though is the team's level of commitment. When I ask how many hours they are prepared to dedicate over and above their normal curricular activities to make this happen, the students' answer is a convincing yes. However, they are realistic about their goals for the first year and don't actually expect to win – however, they are definitely in pursuit of the title for best newcomer.

Around the world the Maltese have a reputation for being a tenacious people, successful at whatever they set their minds on. I can't help feeling that these students are likely to be no exception to that rule. •

are up against. Rather, when asked about the biggest challenges facing them, I'm surprised that they are not worried about the construction and design side of things but are more concerned that they can raise the money needed.

"What we are doing has generated a great deal of interest in the business sector but it's difficult to translate this interest into sponsorship deals," says Dennis Dalli, president and engine team leader. "We already

The students, however, are philosophical about it and relatively unfazed by what lies ahead. Vice president Jean Paul Sultana says that the aim is to set a foundation on which to build for the future.

"We aim to create a knowledge bank that future students will hopefully build on year after year."

As the first generation of students participating in this competition, they don't appear to be intimidated by the more experienced teams they

The budget, at just over €30,000, is a modest sum when considering the amount of work involved. Also, although other teams had built a vehicle in 2005 and 2006 as a separate undertaking, this is the first time that Malta is participating in a worldwide competition of such prestige. The University of Malta Racing Team will be pitching its car against 120 teams from other countries with many that already have an established track record in building such vehicles.