

Formula Student

- International student design competition
- Design, build and race single seater Formula 1 style car
- 600cc motor cycle engine with intake restrictor
- Competition judging criteria includes design quality, costing, static and dynamic tests culminating with an endurance race
- Students from a variety of disciplines involved including engineering, marketing, business, IT, finance etc.
- Funding mainly through industry sponsorships
- NMMU plans to compete in an international Formula Student competition.



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Vehicle Frame Completed!

NMMU Racing reached a significant milestone this month with the completion of the vehicle frame structure and installation of the engine. The team decided that displaying the frame at our annual “Open Day” was an opportunity not to be missed, and worked late into the night to have the frame ready for display on 7 May.

The frame manufacturing process involved cutting all the tubes to length, fixing the suspension mounting tubes to a jig and notching each individual tube to suit its location. After each tube fitted perfectly, it was tack-welded into position ready for the final welding process. The frame had to be built very accurately to ensure that the engine, suspension and other components fit perfectly.

The engine was placed in position during frame assembly. A removable lower cross member allows the engine’s removal for maintenance and repairs.

Now that the main structure is complete, other components can be built onto the frame such as the suspension, fuel tank, differential and steering rack. Suspension uprights, hubs and drive shafts are being custom machined from steel and aluminium to take us through to the next milestone of this project namely, the completion of a rolling chassis!



Frame build involved notching and tacking tubes in place before welding. The engine was installed as part of the frame assembly process.



Open Day Display Draws Much Interest

The annual NMMU Open Day on 7 and 8 May drew prospective students from around the city to visit the various faculty displays in their quest for an ideal career choice.

The School of Engineering was awarded second place for the most interactive stall, where both the Formula Student and Mini Baja projects were displayed. NMMU Racing put on an impressive display with the completed frame, engine and wheels, accompanied by videos of previous Formula Student competitions and the full vehicle design in 3D CAD.

Many interested scholars and students spent time analysing the vehicle and asking countless questions before leaving with literature on the project, as well as the various engineering qualifications available to study.

We were very proud to have the opportunity to show the fruits of our labours, which could not have been achieved without the fantastic support of our university, VW Racing, Continental Tyres and all our other sponsors.



Above: The team poses with the car at the Open Day stall.



Latest images of our Formula Student Car

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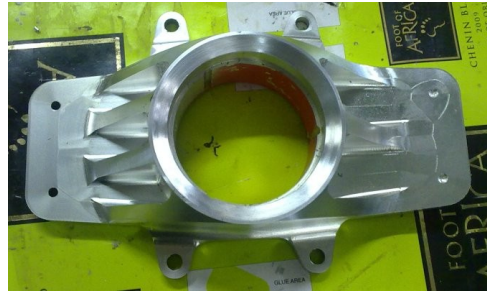
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Suspension Upright



Suspension Upright



Steering Rack Clamps



Throttle Body



Drive Shafts with Tripod Joint



Wheel Hubs

NMMU Racing Sponsors and Supporters

- **NMMU:** financial support
- **VW Racing:** technical support and racing vehicle components
- **Continental Tyres:** racing tyres
- **Nelson Mandela Bay Municipality:** financial support
- **ZF Sachs:** shock absorbers
- **FI Outdoor Karting:** race track use and driver training
- **Terry Moss Racing:** technical and racing support from Terry Moss and Michael Stephen
- **Autograph Racing:** Diktator engine ECU
- **Honda Wing Port Elizabeth:** Technical support
- **SKF Bearings:** vehicle bearings
- **DAAD:** German student exchange funding
- **AIDC:** financial support
- **NRF:** research funding



Automotive Industry Development Centre



More Images from Open Day



Left: Carl van Rooyen tires out the driver's seat, accompanied by Alison Richter and Luke Irlam.

Sides: Its looking like a real car for the first time!

