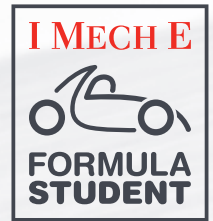


FORMULA STUDENT

Institution of Mechanical Engineers



Congratulations to Manchester Metropolitan University

FOR PARTICIPATING IN FORMULA STUDENT 2008

MMU Racing involves first, second and final year students from our mechanical and electrical undergraduate courses. We have been involved in formula student for two years.

This year, we feel we have made significant progress from last year's 'entry vehicle'. We took on valuable advice from judges, advisors and other teams and have made significant weight reductions and design improvements.

Our focus has been on design for manufacture and assembly. In addition we have improved our use of CAD/CAE software for design and analysis of key components. Particular work has gone into reducing weight in the unsprung mass of the car: carbon fibre wishbones, fabricated uprights, outboard tripodes and inboard rear brakes.

We always look to include some ingenuity in our car and have developed a novel "flappy paddle" gearshifter design incorporating dc motor control.

Teamwork is a challenge. Many of our full-time students have full-time jobs making it difficult to develop a day-to-day team. Instead, we have a flexible team approach, where members can join and leave on an ad-hoc basis.



Length/width/height/wheelbase

92 inches/50 inches
/52 inches/61.1 inches

Track (front/rear)

58.5 inches/54.6 inches

Weight including 68kg driver (front/rear)

220lbs/330lbs (+/-50lbs)

Suspension (front/rear)

Double unequal length A-Arm. Pull rod actuated horizontally oriented/vertically oriented spring and damper

Tyres (front/rear)

18x7.5-10 R065 Goodyear

Wheels (front/rear)

Compomotive CXR 6x13 -30mm offset

Brakes (front/rear)

Cast iron, hub mounted/differential mounted, 9.8 inch dia. Vented

Frame type

Tubular space frame, C350 mild steel tube - cold drawn seamless

Engine

Honda CBR 600 F4

Bore/stroke/cylinders/cc

67mm/2.5mm/4 cylinder/599cc

Fuel

98 octane petrol (Shell Optimax)

Fuel system

Student des/built, fuel injection

Max power/max torque

12,000rpm/6,700rpm

Transmission/differential/final drive

Chain #525/Quaiffe ATB limited slip differential/3