

Goa Times

ADVERTORIAL, ENTERTAINMENT INDUSTRY PROMOTIONAL FEATURE

OF INDIA

Aman Pandae, a BITS student shows off the high-performance Mandrill on campus

Krishna Divkar



BITS GANG BUILDS CAR TO TAKE YOUR BREATH AWAY!

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Students of BITS Pilani KK Birla Goa Campus, Zuari-nagar, have got together to create a car that was presented at Formula Bharat, an engineering and design competition in which university and college students from across the country compete with their life-size Formula 1-style vehicles in areas of engineering design, overall cost, marketability, and dynamic performance. The series replicates the global student Formula series hosted in around 11 countries per year.

"We were required to build a new vehicle from scratch year after year and seek sponsorship and donations by their own

means to fund the project," says Jay Kamat, who was a part of the project and is a second-year mechanical engineering student. The team, Grease Monkeys, comprised 30 students. "There were six from third year,

10 from second year and 14 from first year engineering courses, with people from all branches — mechanical, chemical, electronics, and computer science," says Adarsh Agrawal, a second-year student of

mechanical engineering. "The car has been designed by the third-year students with our inputs and help. The first-year students learnt the basics of manufacturing, designing and vehicle dynamics," he adds.

"Cars like these mean safety and durability, and Sachid Agrawal, student of third-year mechanical, says, "The car was tested for durability, handling and cornering response by our drivers. We took permission from our college for the car to be tested on our premises. Skilled drivers were selected through a series of tests from our college. Driver's safety was of the utmost importance while testing. Various inputs from testing made the car better in terms of performance."

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— Sachid Agrawal, third-year mechanical engg student, BITS

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HELP POURS IN FOR STUDENTS WHO BUILT RACE CAR AT BITS

Krishna Divkar



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Jay adds, "The vehicle weighs 280 kg with the driver; it has a very low centre of gravity, which makes it very stable while cornering. Also, the wheel assembly is designed and tuned to perfection. The safety of the driver was given utmost importance."

"Being the first Formula Student team in Goa, we have been struggling with a lot of things. Firstly, we had to set up a huge knowledge base before starting. So the designing part was difficult as we hardly had any references or benchmarks. We had trouble manufacturing it, because we had to order some costly materials from outside Goa," says Kedar

Khapre, the captain of the team, also a third-year student of chemical engineering.

Grease Monkeys were sponsored and helped by engineering companies. "The car, if you were to make it from new components, would cost about ₹5 lakh. Our institute helped us a lot with the finances. Engineering and metal companies have helped us with manufacturing components, while another engineering company provided us with our tool inventory. Our faculty coordinator, Ranjit S Patil, and the BITS workshop assisted us without which making this car would have been impossible," says Aman Pandae, vice-captain, a student from third year, electrical engineering.

The Mandrill; (below right) the team that built it

CAR SPECS

- Name: Mandrill
- Engine of the KTM Duke 390, a 373 cc mill is installed in the vehicle
- It gives 43 HP @ 9500 rpm
- A torque of 35 Nm @ 7250 rpm
- The car has a chassis length of 2.4m
- Wheelbase of 1.6m and an average track width of 1.1m
- It has a custom-designed wheel assembly which has been manufactured using Aluminium 7076

