

TEAM DEFIANZ RACING

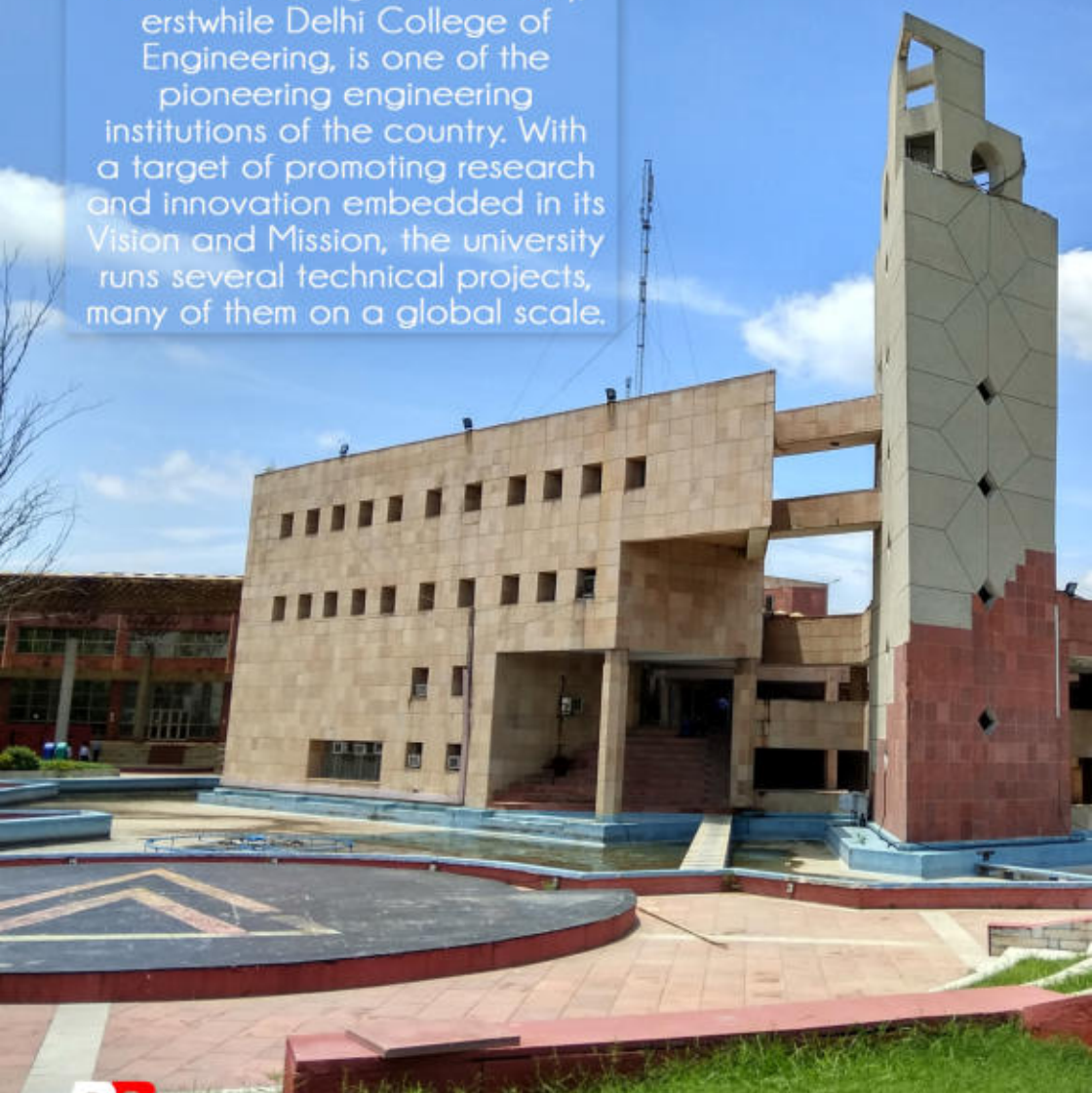


**BROCHURE
2018-2019**

DELHI TECHNOLOGICAL UNIVERSITY



Delhi Technological University, erstwhile Delhi College of Engineering, is one of the pioneering engineering institutions of the country. With a target of promoting research and innovation embedded in its Vision and Mission, the university runs several technical projects, many of them on a global scale.



FORMULA STUDENT

Institution of
**MECHANICAL
ENGINEERS**

Formula Student is the largest engineering design competition in the world. It gives students an opportunity to design and manufacture a race car during their time at University. More than 570 teams from around the world participate in the competition across the globe in countries including UK, Germany, Czech Republic, Hungary, Spain, Brazil, US, Japan, India and Australia.

The concept behind Formula Student is that a fictional manufacturing company has contracted a design team to develop a small Formula-style race car. The prototype race car is to be evaluated for its potential as a production item. The target marketing group for the race car is the non-professional weekend autocross racer.

Each student team designs, builds and tests a prototype based on a series of rules whose purpose is both to ensure onsite event operations and promote clever problem solving. The participants give justification of their design, show the prowess of their drivers, present an in depth cost analysis and pitch their creation to venture capitalists as part of the competition.

This is why the Formula Student is widely acknowledged by many educational institutions and industrial giants as a valuable experience in the learning curve of any student, proven by the fact that the competition is attended by companies amongst the likes of Jaguar, Airbus, Land Rover, Mercedes etc.

About the Team

VISION

TEAM DEFIANZ RACING SEEKS TO INCULCATE LEARNING AND INNOVATION AMONG BUDDING ENGINEERS. TO DO SO THE TEAM STRIVES TOWARDS PROFESSIONAL ENGINEERING PRACTICES AND ACTIVE KNOWLEDGE TRANSFER AMONG STUDENTS.

MISSION

TO BE THE BEST TEAM IN INDIA AND TO BE RECOGNIZED GLOBALLY AS A FORCE TO BE RECKONED WITH.

Team Defianz Racing is the Formula Student team of Delhi Technological University. Set up in 2003, it's the oldest and most prominent Formula Student Team in Asia. The team comprises of 25 determined students who possess extraordinary intellect and aptitude, working together as a single body operating in a multi level hierarchy striving towards the common goal of creating the best car in the continent.

Over a year, we conceptualize and develop a race-ready formula car and participate in competitions in India and abroad. Designing the car requires considerate decision making and trade offs amongst cost, functionality, utility, manufacturability, weight and sustainability. The enduring process involving everything from theory to practical application provides exposure to real world challenges and trains the students to work within a team with a unified direction.



DR18



ENGINE

- KTM 500 EXC - 2019 Single Cylinder
- Displacement: 510 cc
- Compression: 11.8:1
- Peak Power: 38 kW
- Peak Torque: 43 Nm
- DTAFast S80 Pro
- Custom Radiator

VEHICLE DYNAMICS

- Pushrod Actuated Double Unequal Lenth Wishbone Suspension
- Brembo P32 Aluminium Fixed Dual Piston
 - Pedal Force: 0.21 kN
- Hoosier R25B 18 x 6-10
- Keizer 10i 10" Aluminium Alloys
- Tuneable Anti-roll Bar II Variable Ride Height
- Use of Camber Shims - Variable Camber
- Optimised Uprights and Hubs
- Custom designed Brake Disk for Optimum Performance

CHASSIS

- Bare Frame Mass: 20kg
- Torsional Stiffness: 1400 Nm/deg
- IA Energy Capacity: 7.5 kJ
- Weight - 194.5 kgs
- Wheelbase - 1550 mm
- Front Track - 1200 mm
- Rear Track - 1170 mm

AERODYNAMICS

- Downforce: 1025 N
- Drag: 391 N
- Drag Reduction System on Rear Wing Flap
- Coefficient of Lift: -3.3
- Coefficient of Drag: 1.3
- All manufactured with carbon fibre along with Bodyworks

ELECTRONICS

Colour coded and concealed wire loom. Student built Data Logging and Telemetry System along with Java based application for interactive real time analysis of electronics sensor suit.



Team Defianz Racing participated in Formula Bharat at the Kari Motor Speedway in the month of January. The competition saw participation from 70 teams.

STATIC EVENTS

Business Presentation - 3rd

Design Event - 3rd

Cost Event - 2nd

DYNAMIC EVENTS

Acceleration - N/A

Skidpad - N/A

Autocross - 2nd

Endurance - 3rd

Efficiency - 3rd

The Team prepared for the competition over weeks of extensive testing of the vehicle. The Team was able to clear all the required Inspection Tests after surpassing a few minor setbacks, hence qualifying for the Dynamic Events. The Team performed remarkably in all the Static and Dynamic Events.



Achievements



1st in India according to the worldwide rankings



Overall Second - Formula Bharat 2018

- 3rd in Business Plan Event • 3rd in Design Event
- 2nd in Cost Event



Best Asian Team
at FSUK 2017



Best Asian Team
at FSUK 2016



Overall Second - Asia
2014



Best Design - Asia
2009



Design - Third
2008



Cost Analysis - Second
2006



FISITA - Best Endeavour
2003

Previous Years' Cars



2003



2004



2005



2006



2007



2008



2009



2010



2012



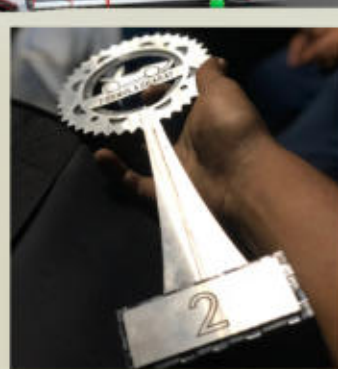
2013



2014



2015





SPECIFICATIONS

1. Engine: 2017 KTM EXC 500
2. Power: 38 kW & Torque: 43 Nm
3. Compression Ratio: 11.8:1
4. Fuel: 97 octane petrol
5. Car Weight: 185 Kgs
6. Top Speed: 141 kmph at 5th gear
7. 0-100 kmph: just over 4 seconds
8. Lateral Acceleration: 1.6g
9. Electronics: In-house built Telemetry & Data Logging System
10. Brake System: 4 wheel hydraulic discs; Rear wheel Drive Layout





SPECIFICATIONS

1. Engine: Honda CBR600
2. Power: 85 bhp at 12500 rpm
3. Compression Ratio: 12.5:1
4. Fuel: 98 octane petrol
5. Car Weight: 215 Kgs
6. Wheelbase: 1600mm
7. 0-100 kmph: 4 seconds
8. Lateral Acceleration: 1.6g
9. Electronics: DTA fast programmable engine control with data recording
10. Brake System: 4 wheel hydraulic discs; Rear wheel Drive Layout



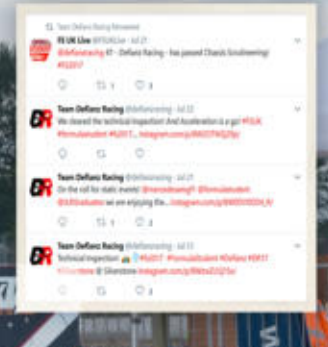
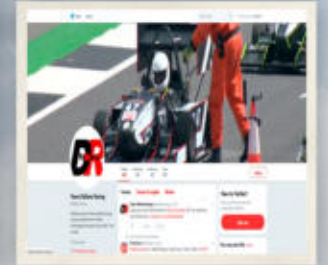
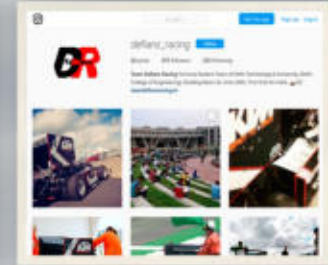
Media for Us



In the past, reputed companies have acknowledged the project's potential and sponsored the team. Being the oldest team in Asia, the team enjoys good media coverage



The team has an active fan following on facebook, instagram as well as twitter with many followers.



facebook.com/teamdefianzracing
Instagram: defianz_racing
Twitter: @defianzracing

Come Onboard



Team Defianz Racing is one of the most prominent Formula Student Teams in India. Currently, we are number 1 in India according to the worldwide rankings. We have been ranked as the Best Asian Team at Formula Student UK 2 years in a row and also we are the First Runner Up at Formula Bharat 2018. Being active for over fifteen years, the team has a very active fan following on its social media pages and also receive a lot of media attention, both print and visual. We use these resources at hand to publicize our sponsors. Since 2003, the team has set benchmarks for performance by Indian teams at Formula Student competitions.

Platinum Sponsor
Above 10 lakhs

Gold Sponsor
Above 5 lakhs

Silver Sponsor
Above 3 lakhs

Bronze Sponsor
Below 2 lakhs

Sponsorship Deliverables



We invite you to come onboard as our sponsor. With your help and support we can turn our Mission in to a reality.

Dealing with dearth of funds, technical setbacks due to absence of required technology and cultural differences, the team has been constantly evolving since. Apart from success at our competitions, we have received much accreditation here at home. We display our cars at prominent malls and auto exhibitions including those at Pragati Maidan and the Expo Mart, Noida, which is also in the best interest of our sponsors. The team is also a Technological Incubator under a government university, therefore sponsoring the team qualifies as an act of CSR under point(ix) of the CSR Act Notification.

DELIVERABLES	BRONZE	SILVER	GOLD	PLATINUM
Logo on Car	✓	✓	✓	✓
Logo on Apparel	✓	✓	✓	✓
Online Publicity	✓	✓	✓	✓
Publicity at Auto Exp / FSB / FSUK	✗	✓	✓	✓
Publicity at University Fests	✗	✓	✓	✓
Monthly Updates	✗	✗	✓	✓
Car Theme	✗	✗	✗	✓
Car & Team Availability	✗	✗	✗	✓

*amounts are in INR

Proud Sponsors of DR18



Past Sponsors



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SOCIAL MEDIA

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