



# CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

NAAC Accredited Institution with 'A' Grade  
Kandlakoya (V), Medchal Road, Hyderabad -501401.

Date:20/03/2018

To  
IQAC,  
CMRCET,  
Kandlakoya (V),  
Medchal Road,  
Hyderabad-501401.

Respected sir,

Sub: Annual report of the SAEINDIA COLLEGEIATE CLUB CMRCET for the A.Y 2017-18.

Following is the brief information of programs conducted by the SAEINDIA COLLEGEIATE CLUB CMRCET for the A.Y 2017-18.

## 1.AERO DESIGN CHALLENGE:

The purpose of the SAEISS Aero Design Challenge is to promote and develop Indian expertise and experience in unmanned systems technologies at the university and college levels. Even small-scale unmanned vehicles are complex systems requiring a well planned and executed design approach. In addition, safety considerations are important factors in this competition as in any other vehicle design project.

The competition is intended to provide undergraduate and graduate engineering students with a real-life engineering challenge. It has been designed to provide exposure to the kinds of situations that engineers face in their real-life work environment. Each team is required to conceive, design and develop a prototype of fixed wing UAV meeting the mission requirements. First and foremost a design competition, students will find themselves performing trade studies and making compromises to arrive at a design solution that will optimally meet the mission requirements while still conforming to the configuration limitations.

The importance of interpersonal communication skills is sometimes overlooked, yet both written and oral communication skills are vital in the engineering workplace. To help teams develop these skills, a high percentage of a team's score is devoted to the design report and the oral presentation required in the competition.

SAEISS Aero Design features two classes of competition – Regular and Micro. Regular Class continues to be the class with the purpose to develop the fundamental understanding of flight and the goal is to lift as much payload as possible. Micro Class teams are required to make trades between two potentially conflicting requirements, carrying the highest payload fraction possible, while simultaneously pursuing the lowest empty weight possible.

The Competition also provides multiple opportunities for teams from all over India to showcase the extraordinary talents of engineering students while encouraging them to develop innovative ideas towards development of improved systems for UAVs.

There are two parts to each competition, each with their own series of events. These parts are known as Static and Dynamic Events. The events award the team points towards a grand total. The team with the greatest total wins the competition overall. Some events, such as tech inspection, award no points but are required in order to proceed to other events for safety reasons.

These are the positions obtained by the team in their respective events.

Technical evaluation: cleared

Dynamic round: cleared

Position obtained 38th

## 2. SAE STUDENT CONVENTIONS TIER II

SAEISS Student conventions tier-II was organized by Collegiate Club of SAE CMRCET at CMR College of Engineering & Technology. The club conducted 35 events which consisted both technical and non-technical events. More than 600 students participated in the events. The whole event was controlled by the collegiate club faculty advisors. The SAE Collegiate club consisted of more than 130 students the whole student army conducted the event and handled all the event. The event was started around 9:30 A.M the chief delegates came from SAEISS the Major Dr. V A Narayana principal of CMR College of Engineering & Technology felicitate the delegates and all the delegates were made to judge some of the competitions conducted in the event. And the other events were judged by the professors and associate professors of the college.

Students divided themselves into groups and a team of three members conducted each event. And in the same way other members took care of other events. The registrations started from 9:30 A.M and students started entering their event places. By the time of 10:30 A.M student organizers started conducting event. All the other faculty of the college guided the students and make sure that the plan was going on with plan. The students started their event and the chief delegates and other important people in the college started to make a good look at all the events going on in the college.

More than 600 students from 12 different colleges all over from south India registered to participate in the event. And many other students from different branches volunteered for a smooth conduction of the event. Till 12:00 P.M morning events were finished and all the participants and volunteers were provided with lunch. Lunch was finished by 1:30 P.M as soon as the lunch was finished the students went to their respective event places and continued their job.



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Till 3:30 P.M the events continued and later the all the participants were instructed to move on to the main auditorium of the college the chief delegates from SAEISS, principal and HOD's of the colleges also felicitated the students and participants and thanked everyone who was responsible for the smooth conduction of the event.

The student winners were announced in the felicitation and were provided with certificates and reward and event was closed around 6:30 P.M.

### 3. E-BAJA

Much like the previous seasons, Baja 2017 was highly organised and immensely challenging to the participants, but the magnanimity was in the scale of the event this year, right from the beginning. There were a record-breaking 414 registrations for Baja 2017, which meant 414 multiplied by up to 25 (students per team/college), summing up to 10,350 participants! This included one team from BITS, Dubai who shipped their pride production all the way from the UAE and back.

That many students arrived at Christ University, Bangalore for Virtual Baja 2017 where they presented their designs, calculations, production strategies and validation plans, to get into an unforgiving short list of 150. There were also eBaja participations, of which 34 were approved for fabrication. So, not even 50 percent of the registered teams were allowed to proceed to production, and yet there were 184 vehicles being built over the next six months all across the country. As usual, Maharashtra, Tamil Nadu, and Karnataka had the higher participation.

There would be a significant difference between an engineering graduate who has been a part of Baja SAEINDIA and not; and hence the sponsoring OEMs grab a couple of them each at the site, at the HR meet. They are not judged based on the performance of their respective vehicles, but simply based on each individual's capability. What could be more fulfilling to the students than this? This is why, at Baja, there is a chance for everybody to win, if not at the race, in life. After getting selected among the top 150 at Virtual Baja where written test and detailed design presentation were conducted, they start the fabrication of their vehicle strictly within the college premises. No outside/professional help is allowed as per the rulebook of Baja SAEINDIA which also dictates various procedures and standards that must be followed while designing and building the vehicle.

From this point on, the Baja Alumni Committee actively keeps in touch with all the teams, to monitor their progress, guide them in decoding and following the rulebook, in purchasing the engine that is standard to all the Baja vehicles, and the like. There are also live webinars (online seminars) organised for the selected teams in computer aided designing and analysis of the components, and the whole vehicle too. The same kind of workshop is conducted physically at different zones in the country for a more up-close interaction for the students – all this for a zero additional fee.

Then various levels of off-site scrutiny is done, via email, through submission of various reports every fortnight, self-certification sheets – towards the end, visit by regional mentors assigned to the teams, and in the end, technical inspection teams visit each college to validate the vehicles a month before they are transported to the Baja site near Indore, Madhya Pradesh. This kind of thorough and periodical audit of the teams, and the human resources – Alumni to help them out (in non-technical matters) to ensure the quality of the vehicles that arrive at the venue.

Once the vehicles are loaded onto the transport truck, the students gather at Indore and attend the HR meet where preliminary tests are conducted for their placement like Baja Aptitude Test (BAT) and psychometric test. The next day (usually on the same day) they unload their vehicles and take it to their respective pits beside at the venue, and they setup their makeshift workshop for the next four days.

The event begins with the business/sales presentation, then the vehicle cost presentation, vehicle-weight check, technical inspection, design evaluation, brake test, acceleration test, sled-pull event, suspension & traction test, and manoeuvrability run.

### 4.GO-KART:

The mission is to bring out the students from their lecture halls and implement their theoretical knowledge and use it practically with few out of box ideas. Also, these techno-manager graduates will run their go-karts on the live arena with 2000+ spectators watching them with keen eyes.

The event is being organized on the eve of BVRIT's Bi-Decennial celebrations with the goal to design, build and race off Go-Kart vehicles. Our motto is to promote Motorsport a profession in India, to encourage the students who have passion, creativity, innovation and practical approach based technical skill in the field of automobile engineering informed KV. Vishnu Raju, Chairman of Sri Vishnu Educational society.

Dr. Rao M. Chalasani, MD of Deccan Auto Ltd; Prakash Kalbag, Executive Director of MG Group; KV Vishnu Raju, Educationist, Chairman of Sri Vishnu Educational Society graced the inaugural function and lighted the lamp and marked the inauguration by releasing balloons into the sky.

The event consists of two phases of selection 1. The virtual round and 2. The dynamic round. In the first phase, the registered students had to submit their design report for which screening has led to the second phase namely dynamic round.

The dynamic round is for four days. After the inauguration on the day one, the two rounds of technical inspection will be held. On the second-day, brake test and acceleration test will be held. And on the third-day auto cross and skid pad test will be held. On the final day, endurance test will take place.

The main motto of the event is to promote motor sport as a profession in India to encourage the students who have passion, creativity and innovation in the field of automobile engineering, announced Prof. Dr. V Murali Krishna.



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Addressing the gathering KV Vishnu Raju, Educationist, Chairman of Sri Vishnu Educational Society said Telangana State is slowly but steadily emerging as Automobile Hub. A lot of automobile industries are eyeing Telangana. Mechanical Stream has a bright future.

Our team secured these positions in their respective events.

Technical evaluation: cleared

Brake test: cleared

Acceleration test: cleared

Endurance: cleared

Overall position: 15<sup>th</sup>

  
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