

N.Manikandan Head

**HOD's Message:**

The Mechanical Engineering Department is focused on providing skill based education to students apart from their regular engineering curriculum. In this direction, they are encouraged to participate in various competitions and get themselves involved in socio-economic projects. We feel these activities will help the students to acquire good technical skills along with the ability to work effectively in a team and produce results. We are glad to mention below some of the projects completed by our students.

**AVCE Racing Team:**

The AVCE Racing Team was started with the objective of gaining knowledge in automobiles and thereby participate in National level Competition, Interested students from II Year onwards register themselves to be a part of this initiative. In this direction our students have built On-road and Off-road vehicles from scratch using scrap automobile parts.

**On-road Vehicle:**

The on-road vehicle, designed and built by a group of 14 students, is made from scrap automobile parts prototyped with angled suspension in the front wheels. The vehicle can travel at a speed of 120 km/h and the team has in its sleeve a few optional strategies to improvise the speed in the future. The team has designed free turn torque in the vehicle to resist and absorb shocks. The front eagle-eye body structure of the vehicle is planned in such a way that the air resistance travels and splits to avoid skids and slides while racing and to decrease the drag force and the lift force to the maximum extent.

**Flag off of On-road Vehicle**

### Off-road vehicle:

The off-road car designed and developed by a team of 14 students using a 150 cc motor cycle engine can be driven on and off cemented or rock-strewn surface. This vehicle with flexible suspension in all four wheels carries maximum load transmission and transmits all road shocks equally. To be able to drive off the pavement, the vehicle has come up with various specifications like the clutch system, brake system, low ground pressure, good ground clearance, and choice of wheels and transmission parts to challenge the modern vehicle development technology. This adaptable vehicle is capable of running at a speed of 90 Km/h in any unpaved surface transmitting shocks.



Flag off of Off Road Vehicle

### APJ Abdul Kalam Model Boat:

Our students built a scale down model boat with the technical support of South Indian Federation of Fishermen Societies (SIFFS) at their Boatbuilding and Research Centre, Veli, Trivandrum. The base design of the boat was prepared by Mr. Renju, a Naval Architect from International Shipping Bureau (ISB) The model has a good wheel house, fish hold, kitchen, toilet, water tank, fuel tank, facilities for storing fishing equipments, separate place for crew resting, lights, signal lights, provision for keeping GPS, Fish finder, CCTV Cams, indicators etc. The work was supervised by the members of the Association of Deep Sea Going Artisanal Fishermen (ADSGAF).



### SAE - GBU OFF ROAD BATTLE:

The SAE – GBU OFF ROAD BATTLE is a national level racing event held at Gautam Buddha University Noida, Uttar Pradesh. Nearly 85 teams from all over India participated in the Off road Battle. The teams competed in various rounds like Virtual presentation, Technical inspection, Acceleration test, Braking test, and Pull the Bull. Clearing these rounds 8 teams entered into the finals and Annai Vailankanni College of Engineering was one among them. In the finals our vehicle was selected as **The Best Safety Feature Enabled Car**. The team also secured the 5<sup>th</sup> position among the 85 participants from all over India. This is one of the proudest moments for AVCE.



This boat is named as "APJ KALAM MODEL BOAT" after the great scientist Dr. APJ Abdul Kalam. The boat operation was demonstrated in the river one KM away from Ananthan bridge, near Nagercoil on 14<sup>th</sup> of November, 2015 in the presence of general public.

A complete boat based on these specifications was launched on Chinnamuttom, Kanyakumari district on 6<sup>th</sup> October, 2016. Our students designed the LED illumination for this boat.

