

## Second Year CLPBL Summary

### **Introduction**

Now-a-days, product development skills in engineering students can be enhanced by using Project-based Learning (PBL) in curriculum. PBL is a technique which motivates students to study the concepts in detail which may or may not be given in curriculum. PBL helps the students to understand the concept more practically. According to the University pattern 4<sup>th</sup> semester of Second year Mechanical Engineering consists of core subjects like Fluid Mechanics, Kinematics of Machinery and Production Process. Students need to study all these core subjects together in one semester, in order to make it easy for them to understand the concepts, we decide to conduct CLPBL for Second year students. This obviously helped them to understand the concepts practically and easily.

### **Problem Statement:**

#### **1. Preparation of MR Fluid and its Application**

The task is to prepare the MR (Magneto rheological) Fluid and to use it in applications like Automobile Braking System, Suspension System etc.

#### **2. Design and Development of Wind Tunnel Setup and experimental analysis on aero foil specimen.**

The main aim is to make a low cost Wind tunnel and to perform experimental analysis mainly the pressure distribution on the surface of various aero foil shaped specimens.

#### **3. Designing of Piping System.**

To determine and minimize various losses in piping system so as to optimize the design.

### **What will students achieve after successful completion of CLPBL?**

Students will be able to-

1. Analyze the engineering problems critically and apply the knowledge of engineering to get the solutions.
2. Design component by using highly advanced software and analytical tools.
3. Develop the concepts which will improve the key performance parameters of the society.
4. Understand the importance of working in team and time management.
5. Improve communication and writing skills.
6. Develop large scale practically feasible model.

**No of Teams: 8**

**Activity: PBL day celebration on 6<sup>th</sup> March, 2019**

Students were supposed to present their updated work with the help of a poster presentation. In total 8 groups made 8 posters and a poster presentation was conducted to check the status of their work. The students were suggested and judged by the panel.





