

## **PROJECT BASED LEARNING**

**Title of the Practice:** Project Based Learning

**Objectives of the Practice:**

- To impart skills to analyze the real world problem and challenges.
- To improve the ability of applying concepts learned during the course to real-life experiences.
- To conduct interactive hands-on sessions in place of traditional classroom instruction.
- To increase the problem solving skills and innovative skills of students.
- To improve the practical skills of the students.
- To provide comprehensive and all-round education.

**The Context**

All students have different perspectives on issues and challenges related to society's technological needs. Students face difficulty in understanding the application of theoretical concepts in the real world. So, sometimes interest is lost in learning theory without knowing its practical application. With the growing need for cutting edge research activities, faculties and students should be able to carry research projects. With this in mind, the Institute decided to implement project-based learning (PBL) for budding technocrats.

**The Practice**

Project-based learning (PBL) is part of the curriculum. PBL allows students to integrate several different concepts learned to solve existing problem of society. As a result, learning becomes an enjoyable journey for both faculty and student. Faculty members identify suitable research projects for students and help students apply concepts learned in tutorials to the development of real-time projects. Participation in project contests, hackathons, and programming contests are also encouraged. It is expected that the engineering graduates must possess the theoretical knowledge, fundamental concepts and the practical skills including ability to think critically. At the college, students are imparted the theoretical concepts through the classroom lectures and laboratory skills are taught in the dedicated laboratories. All the modern machineries are available in the laboratories in order to nurture the students' practical knowledge. For the time constraint factor, the mentors of the student's projects are available on Saturday to guide them. The college also possesses a well maintained library for students so that they can take references

from the research papers, journals. Many memberships are available inside the library for references.

### **Obstacles faced and strategies adopted**

Like any new idea, the proposed mechanism also has constraints. For Project based learning, enough practical knowledge is not gained by the students due to lack of interest and limited time availability for practical classes.

Students are encouraged to participate in the internal hackathons and contests by way of attracting them towards participating in various events and winning many prizes which includes cash prizes, certificates, goodies, trophies and more.

### **Impact of the practice**

Faculty members encourage the students to take up necessary projects and guide them accordingly. The college possesses dedicated laboratories having all the modern machineries for enhancing student's learning scope. Students have won national and international hackathons, project competitions, and programming competitions. Many research projects made by students are funded by government and non-governmental organizations.

### **Resources required**

Laboratories must be upgraded with all the modern machineries and efforts must be laid down to increase the student's interest.

### **About the Institution**

- i. **Name of the Institution** : Dronacharya College of Engineering
- ii. **Year of Accreditation** : Cycle 1: 2005-2010, Cycle 2: 2012-2017
- iii. **Address** : Khentawas, Farrukh Nagar, (123506), Gurgaon, Haryana
- iv. **Grade awarded by NAAC** : Grade B
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- vi. **Contact person for further details** : Prof.(Dr.). B.M.K.Prasad
- vii. **Website** : <https://ggnindia.dronacharya.info>

**Link of the Evidence:**

<https://ggnindia.dronacharya.info/Achievements/Achievements-2021-22.aspx>

<https://ggnindia.dronacharya.info/Winning-projects.aspx>

<https://ggnindia.dronacharya.info/EYantraLab.aspx>

<https://ggnindia.dronacharya.info/RoboticsAutomationLab.aspx>

<https://ggnindia.dronacharya.info/library.aspx>

<https://ggnindia.dronacharya.info/E-Development-Cell.aspx>