

EVENT REPORT

Model Rocket Making Workshop

Date: 14th October, 2022

Location: CAD - CAM Lab, BBIT, V. V. Nagar

Workshop Duration: 2 Days

Number of Participants: 35

The Rocket Model Making Workshop for Diploma Engineering Students was held on 14th October, 2022 at B & B Institute of Technology, Vallabh Vidyanagar. The primary objective of the workshop was to provide students with hands-on experience in building rocket models and to enhance their understanding of aerospace engineering principles.



Workshop Activities:

The workshop encompassed a series of activities designed to engage and educate the participants. The activities included:

a. Introduction to Aerospace Engineering:

The workshop began with a comprehensive introduction to aerospace engineering, covering its various disciplines and its significance in modern society. This session provided participants with a broad overview of the field and set the stage for the subsequent activities.

b. Rocket Design Principles:

The participants were introduced to the fundamental principles of rocket design, including aerodynamics, propulsion systems, stability, and materials used in rocket

construction. Theoretical concepts were explained, and examples of real-life rockets were showcased to illustrate the application of these principles.

c. Rocket Model Construction:

The core activity of the workshop involved the hands-on construction of rocket models. Participants were divided into groups and provided with rocket model kits containing necessary materials and tools. Expert instructors guided the students throughout the construction process, ensuring safety and providing valuable insights into effective construction techniques.

d. Propellant Mixing and Engine Assembly:

In this session, participants learned about different types of rocket propellants and their characteristics. They were given the opportunity to mix propellants under the supervision of experienced instructors. Following the propellant mixing, the participants assembled rocket engines, gaining practical knowledge of engine components and functionality.

e. Launch Preparation and Safety Measures:

The workshop emphasized the importance of safety protocols in rocket launches. Participants were educated on safety measures, including launch site preparation, launch pad assembly, and launch countdown procedures. Emphasis was placed on ensuring the safety of both participants and bystanders during the rocket launch.

f. Rocket Launch:

The highlight of the workshop was the rocket launch event. Participants witnessed their meticulously constructed rockets soar into the sky, experiencing the culmination of their efforts. The launches were conducted in a controlled environment, adhering to safety guidelines and regulations.

3. Learning Outcomes:

The Rocket Model Making Workshop provided participants with numerous learning outcomes, including:

a. Practical Application: Students gained hands-on experience in constructing rocket models, allowing them to apply theoretical knowledge in a real-world context. This practical exposure deepened their understanding of aerospace engineering principles.

b. Teamwork and Collaboration: Working in groups during the workshop fostered teamwork and collaboration among the participants. They learned to effectively communicate, delegate tasks, and resolve challenges collectively, mirroring real-life engineering project scenarios.

c. Safety Awareness: Participants developed a keen awareness of safety measures associated with rocket launches. They gained an understanding of the potential hazards and precautions necessary to ensure the safety of individuals and property.

d. Problem-solving Skills: The workshop presented participants with various challenges during the rocket model construction process. This allowed them to develop critical thinking and problem-solving skills as they encountered obstacles and sought innovative solutions.

e. Practical Exposure: The hands-on experience of propellant mixing, engine assembly, and rocket launching provided participants with practical exposure to aerospace engineering concepts, enhancing their understanding beyond theoretical knowledge.

Conclusion: The Rocket Model Making Workshop for Diploma Engineering Students proved to be a highly beneficial and engaging experience for all participants. Through practical activities, the workshop offered a unique opportunity to explore aerospace engineering principles, foster teamwork, and gain practical exposure. The event was successful in achieving its objectives and left the participants inspired and motivated to pursue further studies and careers in aerospace engineering.