



Department of Mechanical Engineering

Academic Year 2023-24

Report of - “Expert Lecture on Career Opportunities in the Field of CAD/CAM”

- 1. Event Title:** Career Opportunities in the Field of CAD/CAM
- 2. Event Date:** 8 Feb 2024
- 3. Event Conduction Duration:** 4 Hrs.
- 4. Event Venue:** CAD CAM Lab
- 5. Event Resource Person Details:** Mr. Sumant Borade, ACCESS CADD, Nashik
- 6. Name of Event Coordinator:** Prof. P. S. Shirsath and Prof. Y. R. Falak
- 7. Event Objectives & Outcomes**
 - **Objectives of Activity:**
To Responsible for creating detailed 2D and 3D designs for products and components.
 - **Outcomes of Activity:**
Students understood 2D and 3D designs for products and components.

8. Description of Event:

Introduction

The expert lecture on "Career Opportunities in the Field of CAD/CAM" was conducted on 8 Feb 2024. The session was organized by the Department of Mechanical Engineering and featured a prominent speaker, Mr. Sumant Borade, who is a well-known expert in the field of Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM).

Overview of CAD/CAM

The lecture began with an introduction to CAD and CAM, emphasizing their significance in modern engineering and manufacturing processes. CAD involves the use of computer systems to assist in the creation, modification, analysis, and optimization of a design, while CAM refers to the use of software and computer-controlled machinery to automate manufacturing processes.

Career Opportunities in CAD/CAM

Mr. Sumant Borade highlighted various career opportunities available in the field of CAD/CAM, including:

1. Design Engineer:

- Role: Responsible for creating detailed 2D and 3D designs for products and components.
- Skills Required: Proficiency in CAD software such as AutoCAD, SolidWorks, CATIA, and Creo.
- Industries: Automotive, aerospace, consumer electronics, and industrial machinery.

2. Manufacturing Engineer:

- Role: Focuses on designing and optimizing manufacturing processes using CAM software.
- Skills Required: Knowledge of CAM software like Mastercam, Siemens NX, and Edgecam.
- Industries: Aerospace, defence, medical devices, and heavy equipment manufacturing.

3. CAD/CAM Programmer:

- Role: Develops programs to control CNC machines for manufacturing parts and assemblies.
- Skills Required: Expertise in CNC programming, G-code, and CAM software.
- Industries: Precision machining, tool and die making, and metal fabrication.

4. Product Development Engineer:

- Role: Involved in the entire product development lifecycle from concept to production.
- Skills Required: Strong foundation in both CAD and CAM, along with project management skills.
- Industries: Consumer products, automotive, and electronics.

5. Application Engineer:

- Role: Provides technical support and training for CAD/CAM software users.
- Skills Required: In-depth knowledge of specific CAD/CAM software and strong communication skills.
- Industries: Software companies, training institutes, and engineering consultancies.

Skills and Qualifications

Mr. Sumant Borade emphasized the importance of the following skills and qualifications for a successful career in CAD/CAM:

- **Technical Skills:** Proficiency in various CAD and CAM software tools is crucial. Continuous learning and staying updated with the latest software versions and industry trends is essential.
- **Analytical Skills:** Ability to analyze and interpret complex designs and manufacturing processes.
- **Problem-Solving Skills:** Aptitude for troubleshooting and resolving design and manufacturing issues.
- **Communication Skills:** Effective communication is necessary for collaborating with cross-functional teams and conveying technical information clearly.
- **Certifications:** Obtaining certifications from recognized institutions and software vendors can enhance job prospects and credibility in the field.

Industry Insights

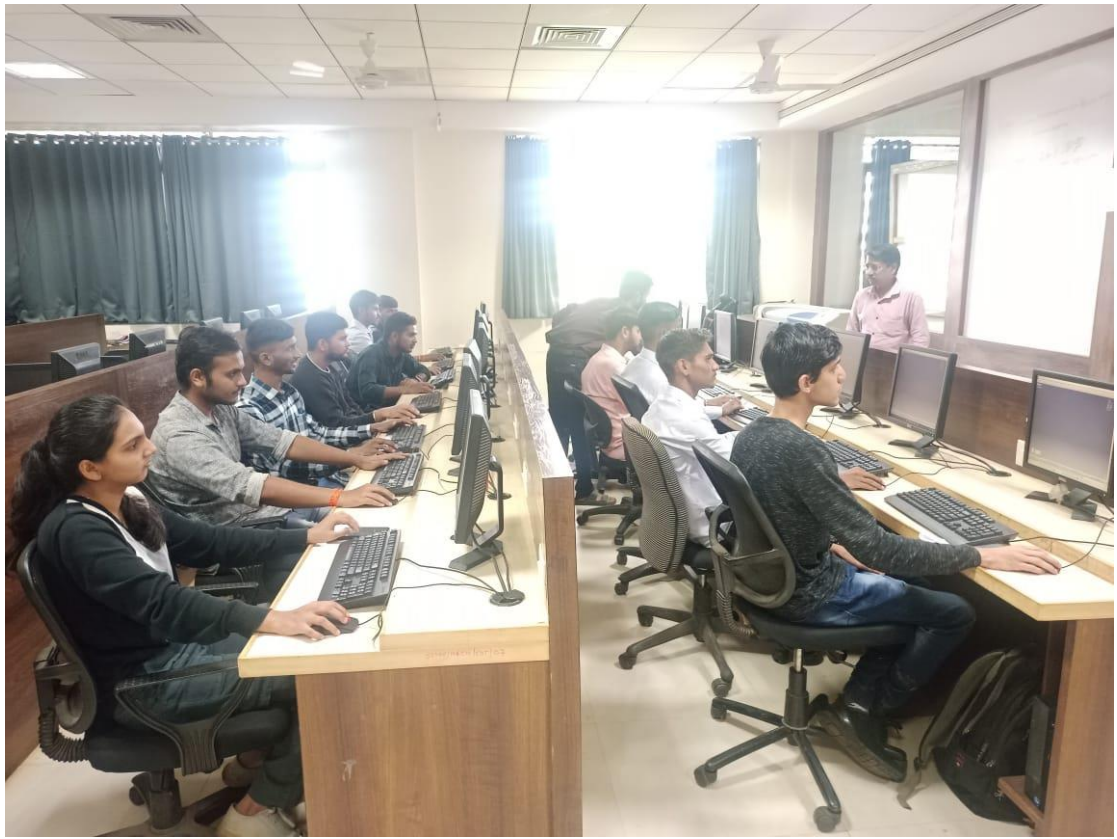
During the lecture, Mr. Sumant Borade provided insights into the current trends and future prospects of the CAD/CAM industry:

- Automation and AI: The integration of automation and artificial intelligence in CAD/CAM software is transforming the industry, leading to increased efficiency and reduced time-to-market.
- Additive Manufacturing: The rise of 3D printing and additive manufacturing technologies is opening new avenues for design innovation and rapid prototyping.
- Sustainability: There is a growing emphasis on sustainable design and manufacturing practices, driving the need for eco-friendly materials and processes.
- Global Collaboration: The global nature of the manufacturing industry requires professionals to work collaboratively across different regions and cultures.

Event photos:-

9. Photograph of “Career Opportunities in the Field of CAD/CAM”








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Event Coordinator


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