

The detailed content for a 2-day training program on "**Design and Modeling using CAD (Computer Aided Design) software**":

Day 1:

- A. Introduction to Computer Aided Design (CAD) and its importance in digital fabrication
 - Overview of the history and evolution of CAD
 - Explanation of the benefits of using CAD in digital fabrication and product design
 - Discussion of the role of CAD in streamlining the design process and improving product quality

- B. Overview of popular CAD software and their features
 - Introduction to popular CAD software, such as Autodesk AutoCAD, SolidWorks, and Fusion 360
 - Explanation of the features and capabilities of each software
 - Discussion of the pros and cons of different CAD software and the appropriate use cases for each

- C. Basic concepts and techniques for 2D drafting and design using CAD software
 - Overview of the basic tools and features for 2D drafting and design in CAD software
 - Explanation of the concepts and techniques for creating and manipulating 2D drawings
 - Hands-on exercises to reinforce the concepts and techniques covered

- D. Introduction to 3D modeling and visualization using CAD software
 - Overview of the basic tools and features for 3D modeling and visualization in CAD software
 - Explanation of the concepts and techniques for creating and manipulating 3D models
 - Hands-on exercises to reinforce the concepts and techniques covered

Day 2:

- A. Advanced techniques for 3D modeling and visualization using CAD software
 - Overview of advanced 3D modeling techniques, such as surface modeling, solid modeling, and parametric modeling
 - Explanation of the benefits and limitations of different 3D modeling techniques
 - Hands-on exercises to reinforce the concepts and techniques covered

- B. Integration of CAD models with other software and tools for digital fabrication
 - Overview of the process for exporting and importing CAD models into other software and tools for digital fabrication
 - Explanation of the importance of compatibility and file formats in digital fabrication
 - Hands-on exercises to reinforce the integration of CAD models with other software and tools

- C. Best practices for CAD design and modeling in digital fabrication
 - Overview of best practices for CAD design and modeling in digital fabrication, such as accurate modeling, robustness, and optimization
 - Discussion of the impact of design decisions on the digital fabrication process and the final product
 - Hands-on exercises to reinforce the best practices covered

- D. Introduction to simulation and analysis using CAD software
 - Overview of the simulation and analysis capabilities of CAD software, such as stress analysis, fluid dynamics, and motion analysis
 - Explanation of the benefits and limitations of simulation and analysis in digital fabrication
 - Hands-on exercises to reinforce the concepts and techniques covered