GD&T Applications Advanced Learning Syllabus

Instructor Information

Instructor
Vishal Rahate
B. Tech Mech
Product Design & Development
Engineer,
JCB, India

Email
vishal.rahate@outlook.com

Office Location & Hours
ONLINE, 40 Hours

General Information

Description
To enable Design Engineers to learn how to correctly apply GD&T in the Manufacturing Drawings, such as interpreting the symbols of form and position tolerancing and their precise application as per Industry standards.

Expectations and Goals
- Develop an understanding of how GD&T can improve the quality of your designs
- Learn how GD&T can reduce scrap and inefficiencies that arise from poor component specifications
- Gain insights and an appreciation of how GD&T can provide competitive advantage to your organization.

Course Materials

Required Materials
- You will be provided Symbol Charts and exercises, for daily sessions like basic models and their drawings.

Students will require
- Siemens NX Software.
- Microsoft Office
- Laptop with Zoom or skype installed.

Course Schedule

Week	Topic	Study	Exercises
Week 1	Basic Principles of GD&T	Symbols and Definitions	Basic drawings practice
Week 2	GD&T as per Manufacturing Process	GD&T Applications	Process study and tables
Week 3	Application of GD&T in drawings	Industry Drawings	Drafting on UGNX with GD&T

Week	Topic	Study	Exercises
Week 4	Reading complex drawings and Modifications in the drawings.	Industry Drawings	Effects of misreading the drawings and modifications in GD&T.

Topics

Date	Subject
Week 1	GD&T Basics as per types of Tolerances
Week 2	Understanding of Manufacturing processes and materials.
Week 3	Application of GD&T as per the processes using UGNX Drafting tools.
Week 4	Complex drawings study and effects of modifications in the drawings on Manufacturing process.

Topic wise Course Content

1. **Types of GD&T symbols**
2. **Feature Control Frame**
3. **Bonus Tolerance Advantages**
4. **Datum References**
5. **Position Tolerances**
6. **Material Conditions**
7. **Location Tolerances**
8. **Profile Tolerances**
9. **Run out Tolerances**
10. **Orientation Tolerances**
11. **Form Tolerances**
12. **Drafting Practices on UGNX with ASME 14.5 STD**