

Course Outline

DEN 431 Intermediate Geometric Dimensioning and Tolerancing (GD & T) Level II

This course contains 12 modules that guide you through the Y14.5 Standard using a logical progression from simple to more complex. Each module is followed by a short quiz. The quizzes should be graded by Friday morning. Application drawings are provided to give you a chance to test your understanding of how to apply the symbols. Solutions to the applications drawings are provided for comparison. Fridays are a good day to discuss the material by email or phone. Use the Communication section of Blackboard for email. Estimates from previous students suggest spending an average of three hours for each module.

Course Learning Objectives:

The major objective is to provide a comprehensive overview of GDT from the potential perspectives of design, tooling, production and inspection. Specific objectives are listed at the beginning of each module.

The list below includes **skills or competencies** a student should possess before they are allowed to enroll in this course.

For example:

- access to a computer
- a v4.0+ web-browser
- a connection to the Internet
- ability to display and print Adobe .pdf and Microsoft .doc files
- basic mechanical engineering drawing reading skills

Course Schedule:

This major topics will be covered as follows:

Week One - Introduction

Week Two - Straightness, Flatness, Circularity & Cylindricity

Week Three - Datums

Week Four - Orientation, Runout & Profile

Week Five - Position - Theory & General

Week Six - Coaxial Controls & Noncircular Feature Location

Required Texts/Materials:

While it is not absolutely necessary, having a copy of the Y14.5M-1994 Dimensioning and Tolerancing standard will make the course more understandable and this standard is required in subsequent courses. You may order this standard from: 1-800-THE-ASME.

Class Participation:

For the maximum benefit, read all assignments and answer the questions in a timely manor. The questions are presented as a method for you to think about the material one more time. There are no punitive results for not answering the questions other than your own conscience.