

CAD Department Course Outline

DRFT 2523 – Introduction to Geometric Dimensioning and Tolerancing (S)

Catalog Description:

This course is an in-depth study of the international standard Geometric Dimensioning and Tolerancing (GD&T) as adopted by the American National Standards Institute (ASNSI). The conventions introduced in this course apply to engineering drawings produced here and abroad. Topics include the placement of datums, dimensions, interpreting symbols, calculating tolerances, and virtual conditions. Outside lab time will be required.

Prerequisites:

DRFT 1234

Credit Hours/Contact Hours/Load Hours:

3/3/3

Target Audience/Transferability:

This course is an elective for students pursuing an AAS degree in CAD with the Mechanical Design option and is non-transferable.

Student Learning Outcomes:

Students will:

- Identify and define the symbols and terms defined in ANSI Y14.5 drafting standards for GD&T
- Identify and define primary, secondary, tertiary, and auxiliary datums
- Define the 3 major classifications of material condition
- Differentiate between tolerances of form and profile
- Differentiate between tolerances of orientation and runout
- Identify and define location tolerances
- Apply the principles of GD&T to a design project

Topics:

- Dimensioning and tolerancing fundamentals
- Introduction to GD&T terms and symbols
- Datums
- Material conditions and symbols
- Tolerances of form and profile
- Tolerances of orientation and runout
- Location tolerances
- Virtual condition

Forms of Assessment:

- Quizzes
- Print reading assignments
- Drawing project
- Final exam

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