



SYLLABUS

SOUTHERN POLYTECHNIC COLLEGE OF ENGINEERING AND ENGINEERING TECHNOLOGY
DEPARTMENT OF ENGINEERING TECHNOLOGY
MET 2301: METROLOGY AND GD&T
SUMMER 2021

Course Information

Class meeting time: Lecture Online Asynchronous,
Lab Hybrid – Monday Online, Wednesday 11:00am-1:45pm Q136

Modality and Location: Hybrid, Q136, (we will also use Q219 and Q120)

Syllabus is posted in D2L

Instructor Information

Name: Randy Emert
Email: remert@kennesaw.edu
Office Location: Q226
Office phone: 470-578-7406
Office Hours: T/Th 1pm-3pm
Preferred method of communication: email listed above

Course Description

2 Class Hours 3 Laboratory Hours 3 Credit Hours

Prerequisite: [EDG 1212](#), [MET 1000](#), and [MET 1400](#), or the consent of the instructor.

Principles of metrology and the relationship of accurate measurement to design practice and production processes are studied. The principles and applications of geometric dimensioning and tolerancing (GD&T) are thoroughly covered. The use of standards, nondestructive testing (NDT), statistics, and utilization and calibration of various precision measurement instruments are addressed. The laboratory illustrates repeatability, reproducibility, and applications of precision measurement devices and nondestructive testing methods.

Course Materials

Required Texts: Geometric Dimensioning and Tolerancing for Mechanical Design, 2nd Edition.

ISBN: 978-0-07-177212-9

Technology requirements: Access to internet; Solidworks

Learning Outcomes

Students completing MET 2301 will have the ability to:

1. Recognize GD&T Symbols, Terms, and Rules.
2. Apply Datums to rectangular and cylindrical parts.
3. Interpret GD&T bonus tolerancing.
4. Apply GD&T position tolerance to an existing part.

Course Requirements and Assignments

There are a total of 11 **Assignments** which account for 20% of your grade. Assignments are given on Monday and Wednesday of each week and are typically due the next Monday or Wednesday. Assignments are from the end of chapter reading in the text. Due dates are found in D2L. A midterm test and final test will be given for the two **Test** grades. The midterm test will be the average of (5) ToolingU lessons specifically on GD&T. Due dates will be given weekly for these lessons but ultimately all (5) lessons must be completed by 6/23 11:59pm. The final test will be an open book test given a week before the final is due. This test will be on the reading, lecture, and assignments. There will be both ToolingU and hands on **Lab** grades. The due dates for labs will be one week from the assigned date. All due dates can be found in D2L. There are five physical labs. The lab grades account for 40% of your final grade.

Evaluation and Grading Policies

Assignments	20%
Tests	40%
Labs	40%

The assignment grades will be posted in D2L no later than one week after their due date. The tests will likewise be posted in D2L no later than one week after their due date. Any discrepancies on assignments, tests, or labs must be identified through email, remert@kennesaw.edu, within one week of being posted in D2L.

GRADING SCALE:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
0% - 59%	F

Grades will be rounded up if they are $>$ or $= .5$ or above, for example, an 89.6 is an A, but 79.2 is a C.

Course Policies

Students are expected to turn in assignments on time. If you are unable to meet a deadline, send an email to remert@kennesaw.edu to document when you will complete the assignment. Communication is key. If you are aware of conflicts email early to notify me that class performance will be affected. All due dates are listed in D2L and the Course Schedule is shown below. If you are unable to meet the due dates due to extenuating circumstances, prior arrangements are required and must be documented through email at remert@kennesaw.edu.

Institutional Policies

[Federal, BOR, & KSU Course Syllabus Policies](#)

KSU Student Resources

This link contains information on help and resources available to students: [KSU Student Resources for Course Syllabus](#)

Course Schedule

MET 2301 Geometric Dimensioning and Tolerancing		
WK1	Ch1 Introduction to Geometric Dimensioning and Tolerancing	6/2
	Ch2 Dimensioning and Tolerancing Fundamentals	6/7
WK2	Ch3 Symbols, Terms, and Rules	6/9
	Ch4 Datums	6/14
WK3	Ch5 Form	6/16
	Ch6 Orientation	6/21
WK4	Midterm	6/23
	Ch7 Position, General	6/28
WK5	Ch8 Composite Position	6/30
WK6	Ch10 Concentricity and Symmetry	7/7
WK7	Ch11 Runout	7/12
WK7	Ch12 Profile	7/14
WK8	Final Exam 11:59pm	7/20

This syllabus including scheduling and grading may be modified based on mutual agreement of instructor and student.