2023 International Mechatronics Conference and Exposition

PRE-CONFERENCE WORKSHOPS

Hamm Institute for American Energy, Oklahoma City, OK
September 27, 2023 | Early Bird **$350**; After 7/1/23 **$395**

GEOMETRIC DIMENSIONING & TOLERANCING (GD&T) WORKSHOP 9am-4pm

Instructor

Dr. Chulho Yang received a Ph.D. degree in Mechanical Engineering from Purdue University as well as M.S. and B.S. degrees from Hanyang University in Korea. He also has a professional engineer (PE) license registered in Oklahoma. Before joining OSU in 2008, Dr. Yang acquired 11 years of industrial experience with ArvinMeritor technical center, IBM Korea, and KIA Motors R&D Center. Much of his work focused on vehicle structure design/optimization, vehicle NVH test and development, CAD/CAM/CAE, and engineering consulting on design methodologies. He also received an "Innovation and Achievement Award" from ArvinMeritor, Inc., a "Best Paper Award" from the International Symposium on Advanced Material and Mechanical Application, and an "Outstanding Presenter Award" from the International Symposium on Green Manufacturing and Applications. He has performed research and published in the areas of mechanical system analysis and design, noise and vibration, experimental sensitivity analysis, structural dynamics and health monitoring, design optimization, biomechanics, and protective device/structure.

Description

Geometric dimensioning and tolerancing (GD&T) is a systematic method for defining and communicating engineering tolerances. GD&T can improve quality and reduce cost through enhanced producibility. In the current industry, GD&T is considered as one of the most critical and important skillsets for design, manufacturing, and quality control engineers. Modern GD&T inspection practice in industry has moved away from simple pass/fail gauging to usage of measurement equipment that produces numerical results. Therefore, it has become more important to know how to define numerical values to measure parts and report per the ASME standards. The concepts and theories on GD&T will be discussed, then how to examine parts for verification and how to create an inspection report according to ASME Y14.45-2021 will be practiced.

Intended audience

Any design/manufacturing/inspection engineers, engineering managers, engineering students, teachers or faculty members who are willing to learn GD&T technique and its applications.

INTRO TO PYTHON 9am-4pm

Instructor

Ellis Nuckolls received BS and MS degrees from Oklahoma State University. He is also a registered Professional Engineer in Oklahoma. For the past thirty-four years he has taught Electrical Engineering Technology at Oklahoma State University. Courses taught are primarily programming, data acquisition, and microcontroller interfacing. He spends his summers working in industry for Enviro Systems in Seminole, Oklahoma.

Description

Python is a general purpose programming language that has become one of the most popular languages in the past few years. One reason it has become so widespread is its versatility. Python can be used for everything from automating simple tasks to machine learning. It can be used for file I/O, numerical analysis, image processing, data base interface, graphical interfaces, network management, web design, machine learning, and much more. Python is available for Windows, Macintosh, and Unix. It has also been adapted for Android, IOS, and even some microcontrollers.

This course assumes no prior knowledge of Python and will begin with an introduction to the basic concepts and syntax. By the end of the course you should feel confident in your ability to use Python for and to continue your learning. This course won't make you an expert but it will give you a running start at becoming one.

Intended audience

Any engineers, managers, engineering students, or faculty who have heard of Python and want to know more about it. No prior experience is necessary.

Use the QR code to register

ceat.okstate.edu/det/conferences/mechatronics-and-robotics.html