

Advanced Manufacturing

# TRAINING EVENT

## MEASUREMENT SYSTEM ANALYSIS



March 12, 2020  
8:30am-4:30pm

St Marys, PA  
Community Education  
Center (CEC)  
4 Erie Ave

**Cost: \$360**  
Lunch included

**To register or for  
additional information:**  
nwirc.org / 814.217.6067  
mreichard@nwirc.org

In our daily work, we often collect and use data to make important decisions about our processes. Measurement System Analysis(MSA) is a structured procedure used to assess the ability of a measurement system to provide good quality data on a consistent basis. This course will give participants an understanding and practical use of MSA.



Participants will learn the concept for assessing, measuring, and improving the reliability of the measurement system, including different sources of measurement variation and techniques to identify, isolate, and reduce measurement variation. A cause and effect diagram will be used to identify the sources of measurement variation and how measurement system variation effects decisions effecting the process.

### Program Content:

- Measurement process and the effects of measurement variation on product quality
- General concepts for properly assessing measurement systems
- How to properly prepare for a measurement system study
- Practices for achieving a reliable measurement system
- What is measurement variation and the sources of variation inherent in a measurement system
- The difference between precision and accuracy
- How to determine bias, linearity, and repeatability and reproducibility
- How to properly identify and isolate the source(s) of measurement system variation
- Methods for reducing measurement system variation

**Instructor:** Max Krug, Eminence Consulting

*Max Krug has over 29 years experience in operations, including 16 years' consulting companies in a variety of sectors. He earned a Bachelor of Science in Industrial Engineering from Alfred University and a Master's in Business Administration from St. Bonaventure University.*

