

February 25 – 27, 2019

The Florida Hotel & Conference Center | Orlando, Florida

1500 Sand Lake Road, Orlando, Florida 32809

1-800-588-4656

## **TE- 1 | February 25 | 8:00 AM - 5:00 PM | 1-Day (8 hours)**

**Course Title:** Good Weighing Practices

**Instructor:** Ian Ciesniewski, Mettler Toledo

**Course Description:** Did you know that a balance calibration is incomplete without a statement of measurement uncertainty? Or that balance uncertainty is largely independent of loaded mass? Most analytical balance weighing inaccuracies occur outside of the balance, but are attributable to influences within the control of the user.

Most calibration regimes contain elements of legacy metrology programs that have been passed directly down from mechanical weighing instruments, even though the components of measurement uncertainty exhibit themselves differently for an electronic weighing instrument.

Many organizations “Over test” without generating much meaningful metrology.

During this session, we will break down how measurement uncertainty exhibits itself across the capacity of an electronic balance or scale. We will cover how to assess and assign a Measurement Uncertainty budget for an electronic balance or scale and discuss robust, risk-based approaches to the assessment and estimation of significant, contributing uncertainty components, in order to build a thorough, yet scientifically-sound risk-based metrology program for bench or floor weighing instruments.

We will cover overcoming potential errors and optimize a balance metrology regime. Focussing on:

- Factors influencing Measurement Uncertainty
- Balance location and set up
- User testing
- Personal weighing technique
- Increasing productivity from your weighing equipment

**Instructor Biography:** Ian has been with Mettler-Toledo since 1988. He is responsible for Technical Weighing Consulting, Education, Metrology and Technical Direction for the U.S. Laboratory weighing market. Ian holds a Masters’ degree in Organic Chemistry. Ian started his career as a research chemist in the chemical and pharmaceutical industry in his native UK. After holding sales positions with Mettler-Toledo in England, he relocated to Switzerland to run technical training courses for sales representatives, service technicians and customers, as well as being involved in new product development and developing strategies for regulatory compliance for pharmaceutical and related industries. After several years in Switzerland, he moved to Mettler-Toledo Inc., in Columbus, Ohio. As Technical Director, he deals with regulatory consulting, technical development of Mettler-Toledo’s North American Sales Force, Customer Training and Mettler-Toledo’s U.S. Mass Metrology Program.