

Continuing Education and Training: Forensic Toxicology Topics



RTI International offers Web-based training courses specifically oriented to issues facing forensic toxicologists. Topics include drug-related deaths, drugs and driving impairment, and drug-related crimes. This training will help enhance efficiency and accuracy of testing, documentation, and reporting; reduce courtroom evidentiary challenges; improve public perception of the criminal justice system; and lower costs related to professional competency, such as travel expenses.

Specimen Validity Testing: The Workplace Experience

This course provides an overview and historical perspective of sample validity testing (SVT) in the United States. The historical overview covers urine specimen tampering practices and identified adulterant and substitution products, the evolution of SVT laboratory procedures, and the implementation of regulatory policies. The National Laboratory Certification Program of the Department of Health and Human Services, Substance Abuse and Mental Health Services Administration's Division of Workplace Programs is presented as an example. The course also presents the effects of several "model" adulterants as well as current specimen validity evaluation approaches, such as measurement of specimen temperature, physical characteristics, creatinine, specific gravity, pH, and oxidizing adulterants, including chromium, glutaraldehyde, pyridine, and nitrite. The course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)

Forensic Science Education Offerings

For more information on current and upcoming educational content, please visit our website or contact us directly.

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Concentration of Oxymorphone in Postmortem Fluids and Tissue

While oxymorphone has been available in the United States since the 1950s, oxymorphone-related fatalities did not noticeably increase in North Carolina until the advent of Opana® in 2006. This course discusses pharmacokinetics, methodology, instrumental analysis, and interpretive considerations and presents several case studies. The course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)



Standard Operating Procedure (SOP) Writing for ISO 17025 Accreditation

Crime laboratories are under increased scrutiny regarding operating practices. Laboratory accreditation is an opportunity for a facility to demonstrate its compliance with established quality standards. ISO/IEC 17025:2005 is an international standard used by forensic science laboratory accrediting bodies to assess the competence of testing and calibration laboratories. The course provides an overview and examples of the ISO 17025 standard as it pertains to technical SOP writing in a laboratory setting. This course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)

Best Practices of Volumetric Measurement

This course provides a review of volumetric measurement practices for bench personnel new to a laboratory or serves as a periodic review for experienced personnel. The module covers volumetric measurements using volumetric glassware, providing details of volumetric flasks, graduated cylinders, volumetric pipettes, burettes, and dispenser pipettes and bottles. It also highlights best practices for volumetric measurements such as calibration, proper documentation, quality assurance, safety, and cleaning. Interactive evaluation questions, video demonstrations, and example graphics are included in the module to help attendees understand the material. The course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)

The Zzzz Drugs: From Analysis to Interpretation

With increased prevalence of new-generation sleep aids, toxicologists need information about the issues associated with the “Zzzz” drugs: zaleplon, zopiclone, and zolpidem. This course provides an overview of these drugs and presents material on related analytical issues, pharmacology/pharmacokinetics, and interpretive issues. Case examples also will be discussed. The course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)

Expert Testimony Training for the Prosecutor and Scientist: Sections I and II

Many toxicologists must provide courtroom testimony in support of analyses conducted in their laboratory. Section I of this curriculum provides a primer on expert testimony issues communicated from a prosecutorial perspective. Material

includes a discussion of rules of evidence and the admissibility of scientific evidence according to Frye and Daubert standards. This section also presents discussion on the basic components of testimony, including *voir dire* and direct and cross examinations. Strategies and example testimonies are provided. Section II covers expert testimony for the forensic toxicologist and is lab oriented. Material includes a discussion of rules of evidence, including Frye and Daubert standards; a discussion of the laboratory's role; legal cases; testing; and retrograde blood alcohol content or BAC calculation considerations. Each course is approximately 60 minutes and is available on demand. (Approved for ACCENT® credit.)

Upcoming Web-based Course Topics for 2011—Delivered Live and On Demand

- The Theory and Practice of Forensic Toxicology
- Mass and Non-Mass Selective Detectors
- Laboratory Quality Assurance and Data Integrity
- Recreational Inhalation and Asphyxia in Death Investigations
- Prescription Drug Overdose in Death Investigations
- Analytical Methods for Regulated Forensic Workplace Drug Testing

This training was produced by RTI International, in part, under cooperative agreements (2007-DN-BX-K208, 2009-IJ-CX-K004, 2009-DN-BX-K115) awarded by the National Institute of Justice, U.S. Department of Justice.

The opinions, findings, and conclusions or recommendations expressed in this training are those of the contributors and do not necessarily represent the official position nor policies of the U.S. Department of Justice.

More Information

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