

## **CHEMISTRY FOR ENVIRONMENTAL PROFESSIONALS – FUNDAMENTALS (165.21) 2 DAYS**

This course provides participants with a review of fundamental chemical concepts which underlie an understanding of applied environmental chemistry concepts and practices. This course is designed for environmental professionals who are not chemists, but who require a basic knowledge of chemistry and environmental chemistry in their work.

Specific topics include unit conversions; chemical bonding; chemical formulas; physical properties; structural formulas; an introduction to organic chemistry, including chemical nomenclature; the theory of operation of analytical methods; and environmental chemical reactions.

This course is immediately followed by the 1.5-day “Chemistry for Environmental Professionals – Applied” training course. Students are encouraged to request both courses when registering.

The “Chemistry for Environmental Professionals – Fundamentals” course begins at approximately 8:00 a.m. and ends at 5:00 p.m. each day.

After completing this course, participants will be able to:

- Describe common scientific measurements and perform unit conversions.
- Describe ionic and covalent chemical bonding.
- Use chemical formulas and the periodic table to calculate the mass of ingredients required to produce given amounts of chemical products.
- Identify physical and chemical properties that affect chemical fate and transport in soil, water, and air.
- Describe the structure of an organic chemical contaminant using common diagramming methods, such as the condensed structural formula and other methods.
- Identify and name simple organic chemicals using the International Union of Pure and Applied Chemistry nomenclature system.
- Describe the analytical methods and instruments used to identify chemicals in environmental media.
- Describe the environmental chemical reactions which cause acid rain.

*Note: Calculators are highly recommended.*

Continuing Education Units: 1.4

ABIH Certification Maintenance points: 2.0