

Graduate  
Students



Advanced  
Undergraduates



# Environmental Forensic Chemistry

## TOX 490/590

## Environmental Forensic Chemistry

Offered Winter 2023, TR 2-3:20pm

CRN 38022/38024, 3 credits

*Ever wonder how chemistry is used to determine criminal liability, for environmental spills, contaminant clean-up, and food fraud?*

*Learn about:*

*Chemical Profiling, Chemistry & Crime & Chemical Techniques of the Chemical Detective*

Pre-requisites:  
1 yr chemistry &  
1 term organic  
chemistry

Through the use of case studies we will explore the following issues:

- **Is scientifically defensible the same as LEGALLY defensible?**
  - Learn about Quality Assurance Standards
- **How are environmental spills identified & natural or anthropogenic source(s) of contaminants determined?**
  - Learn about analytical techniques used in the Deepwater Horizon
- **Is that high priced Kona coffee really Colombian coffee?**
  - Learn about methods for determining the origin of food commodities.
- **How are non-target effects from pesticides determined?**
  - Learn about biomarker techniques for pesticide drift scenarios.
- **How are analytical methods in environmental investigations used?**
  - Learn how to interpret data from different analytical methods and their strength and weakness related to forensic and legal uses.

**Instructor:**  
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