

CURRICULUM VITAE  
**Tammy H. Boles, Ph.D.**  
Assistant Professor

**Address**

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**Education**

- Ph.D. Environmental Sciences – Chemistry Concentration, Tennessee Technological University, 2009  
Dissertation: *Detection and Analysis of Amphetamine-Type Stimulants in Wastewater*
- M.S. Chemistry. The University of South Carolina, 1992  
Thesis: *Quantitation of Maillard Reaction Products in Tissue Protein*
- B.S. Chemistry. The University of South Carolina, 1989

**Professional Experience**

- 2019-present Associate Professor, School of Environmental Studies, Tennessee Tech University, Cookeville, TN
- 2013-2019 Assistant Professor, School of Environmental Studies, Tennessee Tech University, Cookeville, TN
- 2004-2012 Coordinator of Programs, School of Interdisciplinary Studies, Tennessee Tech University, Cookeville, TN
- 1994-2004 Research Assistant II, Center for the Management, Utilization, and Protection of Water Resources, Tennessee Tech University, Cookeville, TN
- 1993-1994 Laboratory Manager, Children's Nutrition Research Center, Baylor College of Medicine, Houston, TX
- 1992-1993 Research Assistant, Stillmeadow & Associates, Sugarland, TX

## **Teaching Experience**

ESS 1020: Connections to Environmental and Sustainability Studies  
ESS 1100: Introduction to Environmental Studies  
ESS 3710: Chemistry and the Environment  
ESS 4001: Society and the Environment: Capstone Experience Part 1  
ESS 4002: Society and the Environment: Capstone Experience Part 2  
ESS 4092: Special Topics: Pharmaceuticals in the Environment  
ESS 4093: Special Topics: Environmental Chemistry Research  
ESS 4900: Internship Summer  
ESS 6970: Special Topics: Environmental Chemistry Spring  
EVSC 6010: Environmental Chemistry  
EVSC 7310: Environmental Forensics  
CHEM 4991: Introduction to Research  
CHEM 4992: Introduction to Research  
CHEM 4993: Introduction to Research  
CHEM 6900: Directed Studies  
CHEM 6970: Advanced Special Topics

## **Research Interests**

Pharmaceuticals, specifically illegal drugs, in wastewater and surface waters by LC-MS/MS and GC-MS<sup>n</sup>  
Detection of microplastics in surface water, wastewater, soil, and sludge  
Metals in water, soil, and plants by ICP-MS and ICP-OES  
Markers of decomposition

## **Professional Society Memberships**

American Chemical Society, Environmental Chemistry Divisions  
Sigma Xi, Scientific Research Society  
International Society of Environmental Forensics  
Tennessee Academy of Science  
The Nature Conservancy  
Women in Higher Education in Tennessee  
American Association of University Women

## **Publications**

Boles, T.H., Douglas, S.B.R., Mahmoudi, F., and DeLafontaine, W.D. (submitted for review)  
“Detection of Opioids in Urban Wastewater Over a Two-Year Time Period Using SPE and LC-MS/MS”

Boles, T.H. & Wells, M.J.M. “Analysis of amphetamine and methamphetamine in municipal wastewater influent and effluent using weak cation-exchange solid-phase extraction (SPE) and liquid chromatography tandem mass spectrometry (LC-MS/MS)”. *Electrophoresis*, 37 (23-24), 2016, 3101-3108.

Boles, T.H. and M.J.M. Wells. "Detection of Methamphetamine in Sewers Using Passive Sampling." *Science of the Total Environment*, 2014, 472, 9-12.

Boles, T.H. and M.J.M. Wells. "Analysis of Amphetamine and Methamphetamine as Emerging Pollutants in Wastewater and Wastewater-impacted Streams." *J. Chromatogr. A*, (2010), 1217 (16), 2561-2568.

Trachtman H; Futterweit S; Maesaka J; Ma C; Valderrama E; Fuchs A; Tarectecan A A; Rao P S; Sturman J A; Boles T H; et al. "Taurine Ameliorates Chronic Streptozocin-Induced Diabetic Nephropathy in Rats." *Am. J. Physiol.* (1995), 269(3 Pt 2), F429-38.

### **University Committee Service**

Curriculum Committee

Graduate Studies Executive Committee

Graduate Faculty

Military Affairs Advisory Committee

Building and Grounds Committee

Stormwater Management Committee

Undergraduate Research and Creative Activity Steering Committee

College of Interdisciplinary Studies Curriculum Committee, Chair

Tech Tomorrow Priority Action Working Group - Education for Life

### **Community Organization Service**

Rotary International, Rotary Cookeville-Sunset, Foundation Chair 2016-2018

Rotary International, Rotary Cookeville-Sunset, Past – President 2015-2016

Rotary International, Rotary Cookeville-Sunset, President 2014-2015

Rotary International, Rotary Cookeville-Sunset, President-Elect 2013-2014

Rotary International, Rotary Cookeville-Sunset, Vice President 2012-2014