

# ENVIRONMENTAL NANOSCIENCE AND RISK, CERTIFICATE

ENHS 772	Human and Ecological Risk Assessment	3
EPID 747	Environmental Epidemiology	3

This cross-disciplinary certificate provides the fundamental concepts and principles of environmental nanoscience and risk to constitute a common ground for multiple STEM disciplines. The certificate will serve employees of agencies and organizations related to regulation and governance of nanoscience and nanotechnology who wish to enhance their professional credentials by adding the foundations of environmental nanoscience and risk to their expertise.

## Learning Outcomes

1. Students will be able to identify and define the basic scientific concepts underpinning environmental nanoscience
2. Students will be able to identify and describe the properties of materials at the nanoscale level, synthesis and characterization of nanomaterials
3. Students will be able to identify and describe the fate and behavior of nanomaterials in environmental systems
4. Students will be able to identify and describe nanotoxicology and risk assessment
5. Students will be able to demonstrate using a suite of laboratory methods, specifically, the tools used in environmental nanoscience such as various separation methods, spectroscopy, microscopy, and other analytical techniques

## Admissions

- Baccalaureate degree from an accredited college or university with a minimum GPA of 3.0 on a 4.0 scale
- Baccalaureate degree Transcript of Record
- Brief Letter of Intent
- Curriculum Vitae
- Two Letters of Recommendation
- Completed UofSC Application Form and fee

## Certificate Requirements (18 Hours)

### Required Courses (15 hours)

Course	Title	Credits
ENHS 764	Principles, Methods, and Issues in Air Quality	3
ENHS 771	Environmental Health Sciences Seminar (1 hour per semester)	1
ENHS 793	Special Topics in Environmental Health Sciences	1-6
ENHS 862	Special Research Topics in Environmental Health Sciences (Approved Research Component)	3

### Electives (3 hours)

Course	Title	Credits
Suggested Courses:		
CHEM 742	Surface Science	3
CHEM 745	Introductory Crystallography	3
ENHS 660	Concepts of Environmental Health Science	3
ENHS 670	Environmental Pollutants and Human Health	3