

# ENVIRONMENTAL NANOSCIENCE AND RISK, CERTIFICATE

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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