



Nuclear Energy and the Environment Workshop

Dr. Lindsay Shuller-Nickles, Environmental Engineering &
Earth Sciences

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This 5-day summer course provides participants with a general understanding of radiation and radioactivity, nuclear fuel cycles, and safe disposal of nuclear materials. Participants will learn through classroom lessons, activities, labs, and field trips, where we will take advantage of South Carolina's nuclear facilities.

Time: This course will take place from 9:00am until 4:00pm July 21-25, with an optional field-sampling trip on July 20. The schedule may be different on field-trip days.

Participants: This course is designed for K-12 teachers in science and math disciplines. It is intended to further participants' nuclear energy knowledge base.

Registration: Registration is due by May 24th, 2014. While the full cost of this course is \$450, local sponsors will supplement the course so that participants pay only \$200. The cost of the optional field-sampling trip is \$40. Checks made payable to "Clemson Environmental Institute" can be mailed to Lindsay Shuller-Nickles, 342 Computer Court, Anderson, SC 29625. Please fill out the attached registration form and return via email (lshulle@clemson.edu) or mail.

Topics covered:

1. Introduction to Radiation and Radioactivity
2. History of Nuclear Energy in the US
3. Nuclear Fuel Cycle Part I_ - The Life Cycle of a Uranium Atom
4. Nuclear Fuel Cycle Part II - Waste Management
5. Nuclear Forensics and Safeguards

Field trip(s) may include Savannah River Site near Aiken, GA and the Oconee Nuclear Power Station near Seneca, SC. The optional field-sampling trip will include collection of natural uranium and thorium minerals and water samples from the upstate.

Expectations/Assignments: Graduate credit hours will not be awarded for completion of this course. However, the material and pace of the course will be at the graduate level. There will be no graded assignments, but readings will be encouraged for elevated discussion and participation during the course.

Recertification: At the conclusion of the workshop, each participant will receive a "Certificate of Completion", which can be used to receive renewal credit. The anticipated number of renewal credits for this workshop is 40 hours. Seven additional renewal credits will be awarded to those participating in the optional field-sampling trip.

Clemson Environmental Institute Summer Workshop Registration Form

Registration is due by May 24, 2014. While the full cost of this course is \$450, the Clemson Environmental Institute will supplement the 2013 course so that participants pay only **\$200** for the week-long workshop and **\$40** for the optional field-sampling trip.

Make checks payable to: **Clemson Environmental Institute**
 Mail payment to: Lindsay Shuller-Nickles, CEI-Summer Workshop
 342 Computer Court
 Anderson, SC 29625

Name: _____

Address: _____

Phone: _____ Email: _____

Sex: M / F Citizenship: US / non-US SSN: _____
(for security clearance)

School/District: _____

Position: _____

Subject/Focus Area: _____

Why do you want to participate in this workshop?

What do you hope to get out of this workshop?

Do you have any prior knowledge about nuclear energy or the nuclear fuel cycle? If so, what experience have you had with this subject?

Indicate whether you plan to participate in the optional field-sampling trip below. If yes, include an additional \$40 in your payment.

Nuclear Energy and the Environment Workshop 9 am – 4 pm, June July 21-25, 2014	<i>yes</i>	\$200
Optional mineral and water field-sampling trip 9 am – 4 pm, July 20, 2014	<i>yes / no</i>	\$40
total due by May 24, 2014:		