

**USNRC Contributions
to the
Enhancement of
Nuclear Programs
at
South Carolina State
University**

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Dean and Professor

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South Carolina State University

South Carolina State University is a Historically Black College (HBCU), founded as an 1890 Land Grant, co-educational institution located in Orangeburg, South Carolina. The enrollment is ~ 4884.

In 2002, SCSU introduced a B.S. program in Nuclear Engineering (jointly with the University of Wisconsin at Madison) and currently SCSU is the only HBCU to offer a B.S. degree in Nuclear Engineering.



BY 2010, HALF OF THE
RESEARCHERS AT THE
NATION'S DEFENSE LABS—
WHICH EMPLOY MORE
SCIENTISTS AND ENGINEERS
THAN ANY OTHER GOVERN-
MENT AGENCY—WILL BE
ELIGIBLE FOR RETIREMENT.

South Carolina State University

In January 2005, there was a total of seven (7) students in the Nuclear Engineering Program at SCSU. Three (3) students were completing course work at the University of Wisconsin. Of the four (4) students remaining at the SCSU campus, one eventually left the program.

PROGRESS OF THE NUCLEAR PROGRAM SINCE JANUARY 2005

- Enrollment Trends (Fall terms)

2002	2003	2004	2005	2006	2007
7	8	7	12	23	41

Enrollment increase is directly related to USNRC support through grants:

- NRC-38-07-320 (NE Enhancement)
- NRC-38-07-702 (Scholarship)
- NRC-38-08-965 (Scholarship)

USNRC Scholarship Recipients 2007-2008

Hampton, Candice	NE Enhancement Scholar - Fall 2008 SO
Hugine, Alysa	NE Enhancement Scholar - Fall 2008 FR
Shine, Justin	NE Enhancement Scholar - Fall 2008 SO
Jackson, Sadie B.	NE Enhancement Scholar - Fall 2008 JR
Chisholm, Katrina	NE Enhancement Scholar - Fall 2008 SR
Davidson, Kayla	NE Enhancement Scholar - Fall 2008 SO
Ellis, Jernai	NE Enhancement Scholar - Fall 2008 SO
Graham, Ashley	NE Enhancement Scholar - Fall 2008 SO
Harris, Jamika*	NE Enhancement Scholar - Fall 2008 SR
Hyatt, Damayne	NE Enhancement Scholar - Fall 2008 FR
O'Bryant, Demanti	NE Enhancement Scholar - Fall 2008 FR
Orridge, Arielle	NE Enhancement Scholar - Fall 2008 FR*
Sheppard, Lorenzo	NE Enhancement Scholar - Fall 2008 FR
Verner, Whitney	NE Enhancement Scholar - Fall 2008 JR

USNRC Scholarship Recipients 2007-2008

Gaffney, Vanna*	NE Enhancement Scholar, Sr
Bennett, Jamar	NE Enhancement Scholar, Fr
Chambers, Landis	NE Enhancement Scholar, Jr
Owens, Olemuel	NE Enhancement Scholar, Fr

PROGRESS OF THE NUCLEAR PROGRAM, cont.

- Federal Agency Support

2003	2004	2005	2006	2007
DOE	DOE	DOE	DOE	DOE USNRC DOEd DoD

ABET EAC ACCREDITATION OF THE NUCLEAR ENGINEERING PROGRAM

The SCSU Nuclear Engineering Program received an ABET-EAC visit in November 2007. In August 2008, the Nuclear Engineering Program became the first new NE Program accredited in over 30 years, and significantly, the first ever accredited at an Historically Black College and University.

ABET EAC ACCREDITATION OF THE NUCLEAR ENGINEERING PROGRAM, Cont.

In all of the key ABET activities,
invaluable contributions were made by
the USNRC's

Dr. John Larkins

who

- Helped formulate the mission statement
- Helped formulate the Program Objectives
- Was the key Industrial Advisory Committee person present during the ABET visit and held discussions with the ABET-EAC review team members.

Student Recruitment

Recruitment occurs along 4 major veins:

1. Major College Recruitment Fairs statewide
2. Electronic Recruitment through Venture Scholars subscription
3. Campus open houses for High School students
4. Grant from USNRC permitted a summer nuclear science program for High School Guidance Counselors who are already assisting the Program

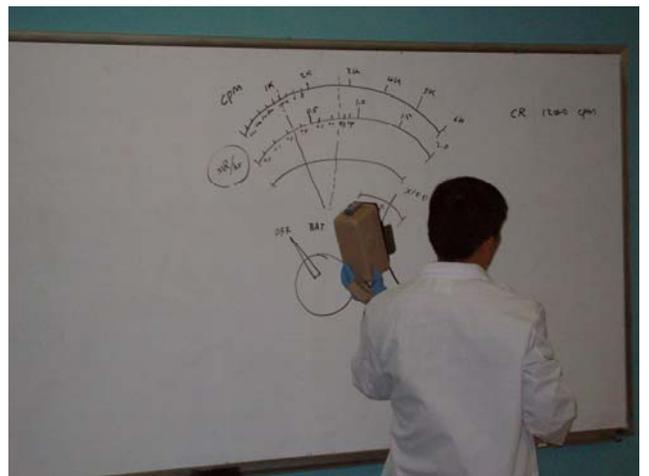
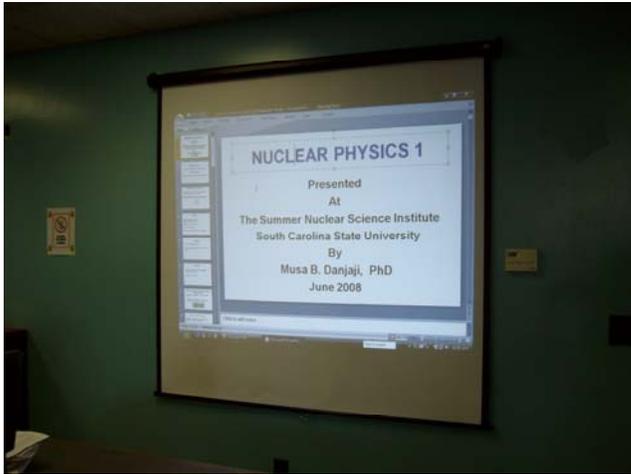
Outreach and Program Enhancement

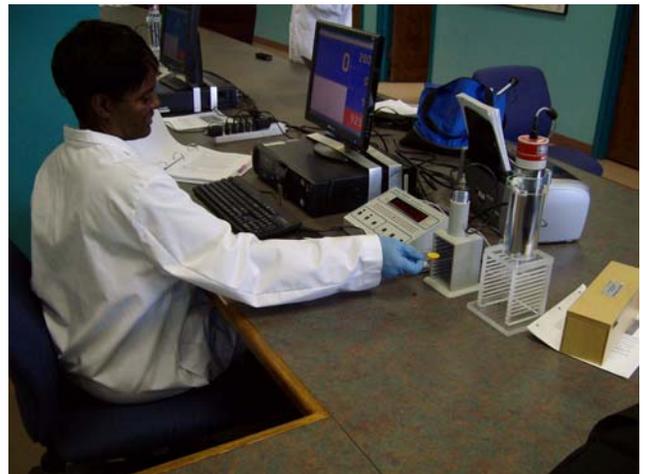
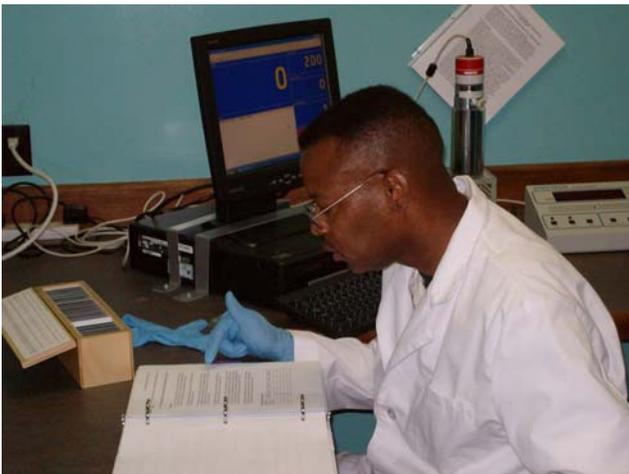
- \$ 90K Grant USNRC-38-07-501 funded Summer Nuclear Science Institute for High School Guidance Counselors (for summers 2008 and 2009)
- Summer Nuclear Science Institute for High School Students (D o ED)

Summer Nuclear Science Institute South Carolina State University



Summer Nuclear Science Institute for
High School Guidance Counselors
July, 2008. Funded by USNRC.





Summer Nuclear Science Institute South Carolina State University



Guidance Counselors search for
“hidden” radioactive sources on the
underside of the poster board

Summer Nuclear Science Institute, Guidance Counselor Field Trip to Savannah River MOX Facility



Summer Nuclear Science Institute South Carolina State University



First session of the Summer Nuclear Science Institute for High School students was in June 2008. Students came from as far away as Tennessee. Included in the group was Eagle Scout candidate Benjamin Briganty, completing the Merit Badge in Nuclear Science and 4.0/4.0 g.p.a. twins Brittany and Briana Dawson.



Summer Nuclear Science Institute South Carolina State University



Summer Nuclear Science Institute South Carolina State University



The Second group of High School students featured at least two students ranked number #1 in their class. All of these students are from South Carolina.

Summer Nuclear Science Institute, June 2008.



Students learned the basics of nuclear science, use of the G-M tube, and an introduction to nuclear spectroscopy, using the MCA. The final exam consisted of identifying “unknown” radioisotopes based upon their photon emission.



Summer Nuclear Science Institute, June 2008.



Radiochemistry and Health Physics Programs at South Carolina State University

Radiochemistry program was established in 2005 through a DOE/NNSA Grant. Four of the first five graduates in the Radiochemistry Option are shown with Dr. Todd Wright, former SRNL Director, summer 2006. All five have now graduated (2008).



Radiochemistry students performing actinide separations at Clemson University during summer 2006.



USNRC Scholarship Recipient Sophie Le, Junior Radiochemistry Major has been a USNRC Intern for 2 years and plans to eventually work for the USNRC.



Sharee Harris (So) and Bradley Childs (Jr),
both Radiochemistry Majors, are USNRC
Scholarship winners.



In 2008 SCSU introduced a Health Physics concentration within the Physics Department.



- USNRC scholar Ashley Graham is one of 3 students to elect this option so far. All 3 are supported through USNRC scholarships.

THANK YOU

USNRC

FOR YOUR

SUPPORT.

QUESTIONS?