



Radiation Protection Technology

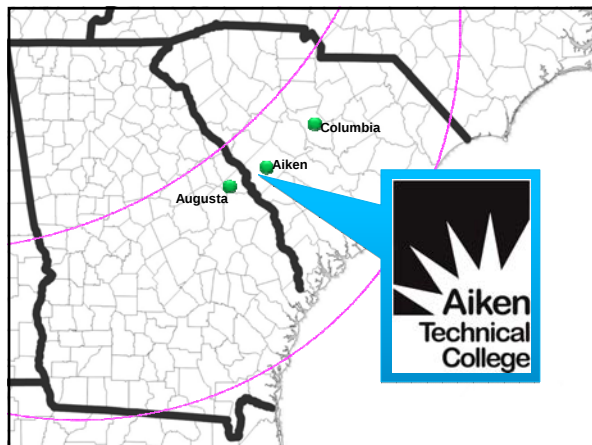
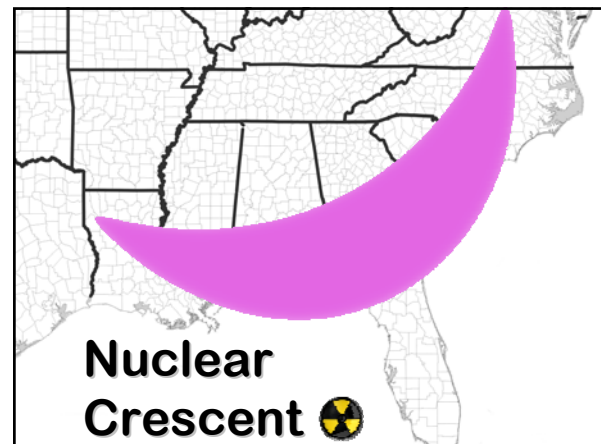
at

Aiken Technical College

Tracy Pferner, PhD
Dean, Technical Education

Wade Miller RRPT, AAHP(A)
Sr. HP, Savannah River Nuclear Solutions
Program Coordinator





ATC Vision



**EDUCATED
ENGAGED
EMPLOYABLE**

We envision Aiken Technical College as a catalyst for developing educated, engaged, and employable individuals whose collective energy will be the driving force for prosperity and quality of life in our diverse communities.



Aiken Technical College (ATC)



Succeed Anywhere
Start Here

Accredited by the Commission on Colleges of the Southern Association of Colleges and Schools

Degrees:
University Transfer
Technical Education
Health Services

10,000 served in non credit offerings each year
Corporate employees – skills development
Quick Jobs Training for unemployed adults

3,500 credit students
Situated on 286 acres
Nearly 200,000 square feet under roof

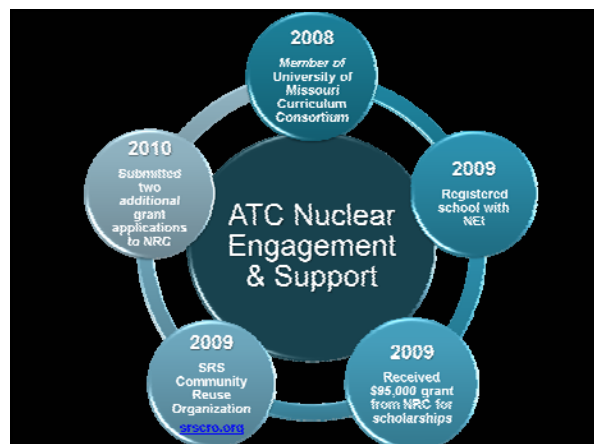
ATC Nuclear Past

1950s	• Savannah River Site, Department of Energy site, established
1970	• ATC began working with Nuclear sector
Past ATC Nuclear Programs	• Associate in Engineering Technology Major in Nuclear Engineering Technology • Health Physics and Reactor Operator emphasis • Hazardous Waste Management emphasis • Certificates • Environmental and Nuclear Technology • Pollution Control and Waste Management technology • Chemical and Industrial Toxicology
1980 – 2000	
2000 – 2002	• Certificate in Industrial Process Technology • Graduates working as senior technicians, first line managers, maintenance, operators, RADCON, Quality Assurance



ATC Nuclear Present

2008	Certificate in Radiological Control
2008 - 2009	Established "Fast-Track" program in cooperation with Savannah River Nuclear Solutions (SRNS)
2009	Associate of Applied Science: Major in Radiation Protection Technology



Industry Partnerships / Support

VC Summer	• Employment - Internships • Field Trips • NUP Exam Sponsor
Bartlett	• Employment - Internships • Contacts with U of M, NEI, Uniform Curriculum
Plant Vogtle	• Equipment
URS/ Washington Group	• Financial Donation
Savannah River Nuclear Solutions	• Fast-track Partner • Learned Executive • Equipment loan

Advisory Committee Support

Members from local industry and higher education



Savannah River Site – SRNS/SRR
VC Summer
Plant Vogtle
Bartlett Services, Inc.
Shaw-Areva/MOX
Parsons
Medical College of Georgia
Eisenhower Army Medical Center/Ft. Gordon
Francis Marion University, Florence, SC
University of South Carolina, Columbia, SC
South Carolina State University, Orangeburg, SC

Full Time Faculty



David Deal
NRRPT, BS,
MACE
Lead Instructor

US Navy - Nuclear (9 years)

- Fast attack Sub - Lead ELT
- Staff Instructor at NPTU
- Ballston Spa, NY - Engineering Watch Supervisor (D1G)

Commercial Nuclear (22 years)

- Entergy
- RP Technician
- RP Supervisor
- ALARA Supervisor
- RP Superintendent
- RP Trainer
- Supervisor Trainer



Wade Miller
RRPT,
AAHP (A)
Program Coordinator

Charleston NSYD, RCT/NEIT (3 yrs)

- NAVSEA 108
- Rad Waste Processing

FermiLab, RCT II & ARSO (7 ½ yrs)

- D&D Project Lead
- Fixed Target Ops, Rad Training

Pantex, HP (4 ½ yrs)

- non-MAA Ops, RGDs, Pit Repackaging

Los Alamos National Lab, HP (3 yrs)

- RGDs, Plutonium Facility

ALARA

Savannah River Site, Sr. HP (3+ yrs)

Sr. Hp, SNM reprocessing facility

ADJUNCTS

Henry Bolen, RRPT SRNS, K-Area ES&H Mgr	21 years - DOE
Greg Cefus, MS SRNL, Office of Global Radiological Threat Reduction	10 years - DOE 12 years - SRNL
Michelle Holman, MS Sr. HP, SRNS	2 years training reactor 1 year commercial nuclear 4 years - DOE
Bill Ferguson, RRPT Principal HP, SRR	6 years US Nuclear Navy 18 years commercial nuclear 20 years - DOE
Pedro LopezdeVictoria, MS Training Manager, Parsons	6 years US Nuclear Navy 13 years commercial nuclear 5 years - DOD 2 years - DOE
Bob Prince, MS Fuel Facilities Inspector, NRC Region II	35 years commercial nuclear 7 years NRC
Gordon Quillin, MS Deputy Director, Radiological Protection Dept., SRNS	15 years commercial nuclear 20 years DOE & private consulting



Curriculum

RPT Courses

RPT-101 – Introduction to Radiation Protection
 RPT-103 – Radiation Fundamentals
 RPT-105 – Reactor Components and Systems (*new*)
 RPT-113 – Radiation Monitoring
 RPT-223 – Radiation Dosimetry
 RPT-233 – Radioactive Materials Handling
 RPT-243 – Radiological Safety and Response
 RPT-253 – Radiation Protection





Industry Focused

RPT-290 – RPT Internship
 RPT-120 – 40 hour HAZWOPER
 ENG-160 – Technical Communications
 ENG-260 – Advanced Technical Communications
 EGR-105 – Safety in the Workplace

Lab Equipment



Donations & Loans



SRS	• Hand-held Survey Instruments • Glovebags and Containment
UNITECH	• Anti-C Neutrons
Friham	• Glovebags • Rad Posing Supplies • Anti-C
VC Summer / Mirion	• EPDs and Reader
RadCo	• Air Sampling Equipment
Value Added Solutions	• Hand-held Survey Instruments

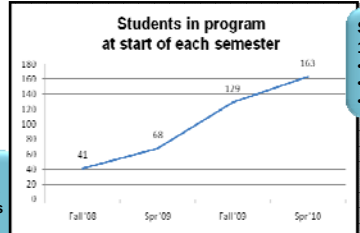


Enrollment & Course History

Fall 2008
41 students

- 3 subjects
- 4 classes
- 2 labs

Students in program at start of each semester



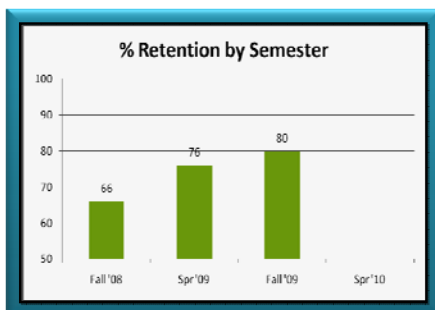
Semester	Students
Fall '08	41
Spr '09	62
Fall '09	127
Spr '10	163

Spring 2010
163 students

- 7 subjects
- 12 classes
- 6 labs

- 16 students obtained certificates in Fall '09
- First Associate Degrees to be awarded Spring '10
- Students have been placed with Unitech and SRS

Enrollment & Course History



RPT Activities / Future

**Workforce and
Business
Development**
MTTC Building

**Technical
Scholars Program**

**DACUM in Nuclear
Maintenance**

Lab Vision

Scenario-driven
mock-ups

**Possible
Relationships**

C&I Training
HPS Student Chapter



How Can You Help?

What are we missing in the program?



Thank You!

Questions?

- Equipment Needs – functional units
- Small HEPA Ventilation Unit with approximately 25' of ventilation trunk
- Small HEPA Vacuum Cleaner
- 3 - (5 gal) Poly Bottles and drain rigs with tygon tubing and HEPA Vent rig
- 6 Teletrix EADs
- 2 Teletrix Radiation Survey Instruments (RO-2 (2A) equivalent)
- SAM Trainer (Small Article Monitor)
- ARM Trainer (Area Radiation Monitor)
- CAM Trainer (Continuous Air Monitor)

- Equipment Needs – non-functional units okay
- 20 TLDs with holders (Thermoluminescent Dosimeter)
- 20 SRDs (Self-Reading Dosimeter)
- 20 EADs (Electronic Alarming Dosimeter) (functional ones would be great!)
- PCM (Personnel Contamination Monitor) (functional one would be great!)
- Old GELi detector - actually any old detector of various types that can be used as a pass around in class

- Supply Needs
- SOPs (Step-Off-Pads) 6 of each variety –
 - High Contamination to Contaminated;
 - Contaminated to Clean
 - Others?
-
- Posting Material
 - Insert type sign placards – 50
 - Variety of inserts – 25 of each
 - Very High Radiation Area
 - Locked High Radiation Area
 - High Radiation Area
 - Radiation Area
 - Radiologically Controlled Area
 - Contaminated Area
 - High Contamination Area
 - Alpha Contamination Present
 - Airborne Radioactivity Area
 - Respiratory Protection Required
 - Notify RP prior to Entry
 - RWP Required for Entry
 - No Eating, Drinking, Smoking, or Chewing
 - TLD and EAD Required For Entry
 - TLD Required for Entry
 - RP Escort Required for Entry
 - Others (?)

Curriculum Display

Radiation Protection Technology Program

			Catalog Year			
Semester	Course Number	Course Title	Lecture Hrs	Lab Hrs	Total	Hrs
Fall 1						
	RPT 101	Introduction to Radiation Protection	1			1
	RPT 103	Radiation Fundamentals	2	3		3
	CPT 101	Introduction to Computers	3			3
	MAT 110	College Algebra	3			3
	BSD 101	Biological Science I	3	3		4
Semester Total Hours						14
Spring 1						
	RPT 113	Radiation Monitoring	3	3		4
	ENG 160	Technical Communications	3			3
	MAT 111	College Trigonometry	3			3
	ESR 105	Safety in the Workplace	1			1
	CHM 105	General/Organic/Biochemistry	3	3		4
Semester Total Hours						15
Summer 1						
	RPT 200	RPT Internship		12		4
	PSC 201	American Government	3			3