

2017 THE SCIENCE OF NUCLEAR ENERGY AND RADIATION  
 Science Teachers Workshop  
 Virginia Commonwealth University  
 July 24-28, 2017

**DRAFT SCHEDULE (REV 5, 07/21/2017)**

<b>Monday, July 24, 2017</b>			
12:00 PM	Registration and check-in	Various staff	Johnson Residence Hall 801 W. Franklin St.
1:00 PM	Lunch Welcome, logistics, teacher introductions, icebreaker Review Technical Program Discussion of pre-workshop homework and expectations	Sama Bilbao	East Engineering Hall Da Vinci Room (E3229) 401 West Main Street
3:00 PM	Basics of Radiation	Keith Welch	
4:00 PM	Discussion		
4:15 PM	Break		
4:30 PM	Biological Effects of Radiation	Carl Tarantino	Engineering East Hall Da Vinci Room (E3229)
5:30 PM	Discussion		
5:45 PM	Break		
6:00 PM	Hands-on Activity (Utilizing the Chart of the Nuclides)	Dave Sanderson	Engineering East Hall Da Vinci Room (E3229)
6:30 PM	Dinner		
7:00 PM	Keynote Speaker – The Nuclear Challenge	Gene Grecheck Past President ANS	
8:00 PM	Daily Recap – How can you use all you learned today in your classroom?	All	
8:30 PM	Adjourn		

<b>Tuesday, July 25, 2017</b>			
7:00 AM	Breakfast		Shafer Court Dining Center
8:00 AM	Introduction & Logistics	Sama Bilbao	Engineering East Hall Da Vinci Room (E3229)
8:15 AM	Radiation Detection and Nuclear Imaging	Jason Dunavant	
9:15 AM	Discussion		
9:30 AM	Break		
9:45 AM	Hands-on Activities (Cloud Chamber Construction, Half-Life Activity)	Dave Sanderson	
10:30 AM	Beneficial Uses of Nuclear Science and Technology	Sama Bilbao y Leon	
11:30 AM	Discussion		
11:45 AM	Lunch		Shafer Court Dining Center
1:00 PM	Nuclear Power in VA, the US and the world	Nicole Waugh	Engineering East Hall
2:00 PM	Discussion		Da Vinci Room (E3229)
2:15 PM	Break		Engineering East Hall
2:30 PM	Trip to MCV Medical facility, by Hired Bus		Hired Bus
3:00 PM	Nuclear Medicine, Lecture and tour of the MCV facilities: Cyclotron, PET Scanner and Radiochemistry Lab	Mark Crosthwaite Paul Riley	VCU Medical Campus Sanger Room 1-044
5:30 PM	Return to East Engineering Hall by Hired Bus		Hired Bus
6:00 PM	Dinner		
7:00 PM	Keynote Speaker – Energy Source Comparison: Pros and Cons	Supathorn Phongikaroon	Engineering East Hall Da Vinci Room (E3229)
8:00 PM	Daily Recap – How can you use all you learned today in your classroom?	All	
8:30 PM	Adjourn		

<b>Wednesday, July 26, 2017</b>			
7:00 AM	Breakfast		Shafer Court Dining Center
8:00 AM	Introduction & Logistics	Sama Bilbao	Engineering East Hall Da Vinci Room (E3229)
8:05 AM	Reactor Theory 101	Chris Wells	
9:05 AM	Discussion		
9:15 AM	Nuclear Power Plant Technology	Gregory Meinweiser	
10:15 AM	Discussion		
10:30 AM	Break		
10:45 AM	Reactor Safety	John Harrell	
11:45 AM	Discussion		
12:00 PM	Lunch		Shafer Court Dining Center
1:30 PM	Radiation Counting Lab, Lab Groups 1-4 (Room E3210)	María Molina	Engineering East Hall Room E3210 Room E3213
1:30 PM	Nuclear Simulator Exercise, Lab Groups 5-8 (Room E3213)	Sama Bilbao y Leon	
3:30 PM	Break		
3:45 PM	Radiation Counting Lab, Lab Groups 5-8 (Room E3210)	María Molina	
3:45 PM	Nuclear Simulator Exercise, Lab Groups 1-4 (Room E3213)	Sama Bilbao y Leon	
5:45 PM	Break		
6:00 PM	Dinner		Engineering East Hall Da Vinci Room (E3229)
6:30 PM	Discussion of Laboratories and Nuclear Simulator Exercises	All	
7:00 PM	Team Exercise – Design of a classroom activity	All	
8:00 PM	Daily Recap – How can you use all you learned today in your classroom?	All	
8:00 PM	Adjourn		

<b>Thursday, July 27, 2017</b>			
7:00 AM	Breakfast		Shafer Court Dining Center
8:00 AM	The Nuclear Fuel Cycle (Front end including mining)	Nick Wilson	Engineering East Hall Da Vinci Room (E3229)
8:45 AM	Discussion		
9:00 AM	The Nuclear Fuel Cycle (Back end)	Michael Woods	
10:00 AM	Discussion		
10:15 AM	Break		
10:15 AM	Nuclear Security, Safeguards and Non-proliferation	Braden Goddard	
11:15 AM	Discussion		
11:30 AM	Future of nuclear technology: Advanced (Gen IV) Reactors, Small Modular Reactors, Fusion technology	Sama Bilbao y León	
12:30 PM	Discussion		
12:45 PM	Lunch		Shafer Court Dining Center
2:00 PM	Use of Nuclear Science and Technology and Radiation in the Classroom	Connie Wooldridge	Engineering East Hall Da Vinci Room (E3229)
4:00 PM	Break		
4:15 PM	Careers in Nuclear Science, Engineering and Technology	Matt Kellam	
5:15 PM	Discussion		
5:30 PM	Preparations for Surry Power Plant Tour	Catie Pittman	
5:45 PM	Dinner		
6:30 PM	Nuclear energy moving forward: Politics and Public Opinion	Michael Purdie	
7:30 PM	Daily Recap – How can you use all you learned today in your classroom?	All	
8:00 PM	Discussion		
8:15 PM	Adjourn		

<b>Friday, July 28, 2017</b>			
7:00 AM	Breakfast		Shafer Court Dining Center
8:00 AM	Check out	Various staff	Johnson Residence Hall 801 W. Franklin St.
8:30 AM	Leave for Surry Power Station		
10:00 AM	Arrive at Surry Nuclear Information Center (SNIC)		
10:30 AM	Introduction to Surry	Carol Elmore SPS Management	SNIC
11:00 AM	See-Thru Reactor and SNIC Tour, Lab Groups 1-4	Carol Elmore Dana Knee David Sanderson Catie Pittman	SNIC
11:00 AM	Visit to the Control Room Simulator, Lab Groups 5-8	SPS Training & Operations	Surry Training Building
12:30 PM	Lunch		SNIC
1:30 PM	See-Thru Reactor and SNIC Tour, Lab Groups 5-8	Carol Elmore Dana Knee David Sanderson Catie Pittman	SNIC
1:30 PM	Visit to the Control Room Simulator, Lab Groups 1-4	SPS Training & Operations	Surry Training Building
3:00 PM	Course summary, evaluations	All	SNIC
4:00 PM	End of course		

