



## 2014-2015 UNIVERSITY OF TENNESSEE American Nuclear Society

### Samuel Glasstone Award

Founded in 1959, the University of Tennessee ANS Student Sections is one of the oldest sections in the Country. We represent anyone who aspires to work in the nuclear industry, nuclear engineers and other majors as well. Throughout the year, we host social events and meetings. Some events are nuclear related, others not so much. We hope to create an enjoyable experience for the students so they continue to stay active in the nuclear field.

#### Officers

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President - Jerrad Auxier

Vice President - Remy Devoe

Treasurer - Greg Meinweiser

Secretary - Seth Langford

Webmaster - Jessica Shewmaker

#### Board of Representatives

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Graduate: Tyrone Harris

Senior: Daniel Tenpenny

Junior: Alyxandria Wszolek

Sophomore: James Ghawaly

Faculty Advisor

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American Nuclear Society

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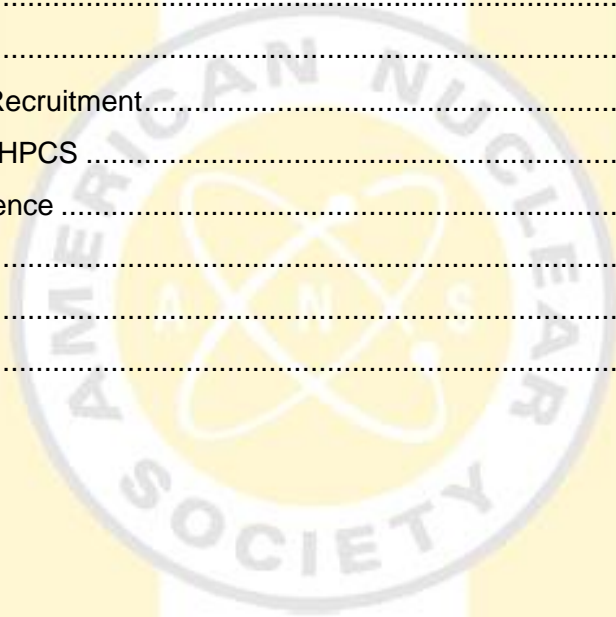
<http://web.utk.edu/~ans/>

<https://www.facebook.com/groups/UTKANS/>

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## University of Tennessee American Nuclear Society Student Section

### Introduction

### Section Management

#### President

Jerrad Auxier is the president of the ANS UTK student chapter and a PhD candidate in Nuclear Engineering. Jerrad has been responsible for setting up a PayPal account for the student chapter to ensure that membership and payments for merchandise can be made easily and efficiently. He helped to create the email list for to ensure that the members stay informed about meetings and events that the ANS hosted. It was his responsibility to coordinate the monthly meetings for the student chapter, and contacting potential speakers for these meetings. He also helped to connect the students with potential job opportunities that the nuclear engineering department or other companies were providing, and he helped to coordinate the tour of the Watts Bar Reactor facility. Jerrad plans on completing his PhD at the University of Tennessee, and pursue other positions offered by the ANS SSC.

#### Vice-President

Remy Devoe is the vice president of the UTK student chapter and a graduate student pursuing a Master's in Nuclear Engineering. The vice president participates in most of the management and coordination of events for the student chapter. Part of his activities with the UTK student chapter has been organizing outreach and public relations events. These include the EPA Clean Power Plan hearing in Atlanta, GA and the Nuclear Science week 'Nukes on the Walkway' booth. Remy plans to continue as a Ph.D. candidate at The University of Tennessee and support the next executive committee of the UTK ANS student chapter.

#### Secretary

Seth Langford, a longtime ANS member and a first year graduate student served as secretary. His roles include recording meeting minutes and participating in other officer duties. His accomplishments include arranging for a guest lecture from NuScale Power and participating in nuclear outreach activities with the local ANS chapter.

### Treasurer

Gregory Meinweiser, a senior in Nuclear Engineering, served as treasurer for the 2014-2015 academic year. The treasurer's duties included budgeting and financial planning for the student chapter, as well as fundraising ideas and asset management and organization.

### Web-Master

Jessica Shewmaker is a graduate student in the mechanical engineering department of the University of Tennessee. Duties of webmaster include ensuring the chapter's social media presence is active and up-to-date, keeping the chapter's website accessible and accurate, and keeping the email system used by the executive committee well-organized and usable for communicating with the chapter's members.

### Board of Representatives

The Representatives are active ANS members who are voted by their respective class to represent them. This ensures that the society can reach the needs of the students in the entire department and that everyone has a voice. The duties of the representatives include participating in ANS executive board meetings to provide additional input, and assisting in the organization of events. They also communicate the benefits of ANS to their class and serve as an easy point of contact. The Board of Representatives include Tyrone Harris, Daniel Tenpenny, Alyxandria Wszolek, and James Ghawaly as the graduate, senior, junior, and sophomore representative respectively.

### Senior Representative

Daniel Tenpenny, a senior in Nuclear Engineering, served as Senior Representative for the 2014-2015 academic year. The senior representative's duties was to offer a supportive role within the executive committee and to prepare for the meetings. He also was involved via chair heading the social and outreach committees.

### Junior Representative

Alyxandria Wszolek is a third year in Nuclear Engineering student and serving as the junior governor of the 2014-2015 UTK ANS Board of Governors. She supported the endeavors of the executive committee. She has also been integral in the organization of project reporting and collaboration with Women in Nuclear (WiN).

### Sophomore Representative

James Ghawaly is a sophomore studying Nuclear Engineering at the University of Tennessee in Knoxville. He is currently working as an undergraduate researcher for the Howard Hall Nuclear Security Research Group. His current research interests lie in the application of detectors for Nuclear Security, with an emphasis on the application of detectors to Nuclear Security and other specialized fields in Nuclear Engineering and physics. James plans to eventually obtain his doctoral degree in Nuclear Engineering. One day, he plans to work in research focused on the development of high-tech radiation detection equipment.

### Operations

#### ANS Lounge

During the past year, a large room has been opened up by the Nuclear Engineering department for use as a student lounge. This facility includes a computer lab, printer, large conference tables, a library, and presentation practice room. This has been adopted by the ANS at UT. This chapter has provided several other amenities to the lounge such as a coffee maker, coffee and creamer, a microwave, and an Xbox 360. The ANS has seen many beneficial outcomes from providing these. For example, there have been many friendships made across all classes and has improved camaraderie among students significantly.





*Figure 1: Students playing video games in the ANS Lounge*

### Financial Planning

The UTK ANS chapter has a checking account and savings account at the University of Tennessee Federal Credit Union (UTFCU) that holds all funds received by the student section. Access to these funds is provided to the president, treasurer, and faculty advisor for beneficial use to the UTK ANS chapter such as providing meals at body meetings, conference and trip reimbursements, and upgrading the ANS lounge. A yearly \$25.00 membership fee was instilled to aid in providing these services. This year the fee also included a t-shirt and a lanyard. A PayPal account was created in order to better organize billing and to provide a more convenient method of payments through electronic invoices. There was also an anonymous donation for \$2,000 with no preferred usage. This was utilized for trip and conference expenses to allow more students to tour reactors, attend conferences, and more. A summary of the funds provided this year and their sources are listed in table 1.

Table 1: Shows the prices for the merchandise and funds acquired after selling the listed merchandise

Sources and Amounts of Funding for 2014-2015	
Sources	Amount
ANS Polo	10.00
ANS T-shirts	15.00
ANS Lanyards	5.00
RCoE Shirts	31.00
Membership	15.00
Membership Package	25.00
Merchandise Sale	3,527.00
Anonymous Donation	\$2,000

### Merchandise

During this past year, the student ANS chapter purchased promotional merchandise to help raise funds and promote membership for the 2014-2015 semesters. There were four types of merchandise that was purchased: Polo ANS shirts, Polo Radiochemistry shirts, ANS T-shirts, and ANS lanyards.

The polo ANS shirts are shown in Fig. 1 and the price of these shirts are list in Table 1. These shirts were purchased to provide the members with a formal shirt to wear to conferences and local meetings. These polos sold successfully with over 100 shirts selling during the year, and we plan to purchase new ones for the 2015-2016 year. Lanyards were also purchased as promotional merchandise, and over 80 of these lanyards were sold during this year. These are shown in Fig.2.





*Figure 2: The ANS polos sold the 2014-2015 year*



⌘ NUCLEAR VOLUNTEER ⌘

⌘ NUCLEAR VOLUNTEER ⌘

*Figure 3: The ANS lanyards that were sold the 2014-2015 year*

The next piece of merchandise that was purchased was the t-shirts shown in Fig. 3. The design was created by the officers, and these shirts were either sold separately or added into the membership package. The shirts were used to help promote knowledge of the student chapter, and help promote the idea of nuclear energy. They are shown in Fig.4 being worn by our officers at the EPA hearing that were held in Atlanta, GA. There were over 120 of these shirts sold to the members, students, teachers, and people that attended the ANS events.



Figure 4: The ANS t-shirts sold for the 2014-2015 year



*Figure 5: (From left to right) Daniel Tenpenny, Gregory Meinweiser, Remy Devoe at the EPA hearings*

The last piece of merchandise purchased by the ANS student chapter were the Radiochemistry Center of Excellence (RCoE) Polos. The RCoE was recently established at the University of Tennessee and offered to help the student chapter raise funds by selling the polos to the faculty of this center. These shirts are shown in Fig.5, and 20 shirts were sold to the faculty.



*Figure 6: The RCoE shirts sold by the ANS student chapter for the 2014-2015 year*

#### [ANS Emails and Dropbox and Facebook](#)

The primary form of communication used this year was by email. When the members paid for membership, their emails were added to the email list. The email was used to inform the students about upcoming meetings, potential job opportunities, and emails from the local section. The UTK ANS has a dropbox in which all of the member of the Executive Board and Board of Representatives have access. In this folder is documentation of the society

The UTK ANS was able to supplement usual general body email announcements with a Facebook page and Facebook group. The Facebook page (open to all) is a very useful tool to distribute news of events, deadlines, and general world happenings. Many articles from Nuclear Energy Institute (NEI), International Atomic Energy Agency (IAEA), and local nuclear related industries such as Tennessee Valley Authority (TVA) and Analysis and Measurement Services Corporation (AMS) are posted to the wall for the benefit of its followers. The Facebook group was developed inside of UT's own collegiate group. This allows more efficient and organized communication among members. One highlight of the



group is the exchange of textbooks and class advice from upper classmen to freshman and sophomores, creating a better sense of comradery among the members.

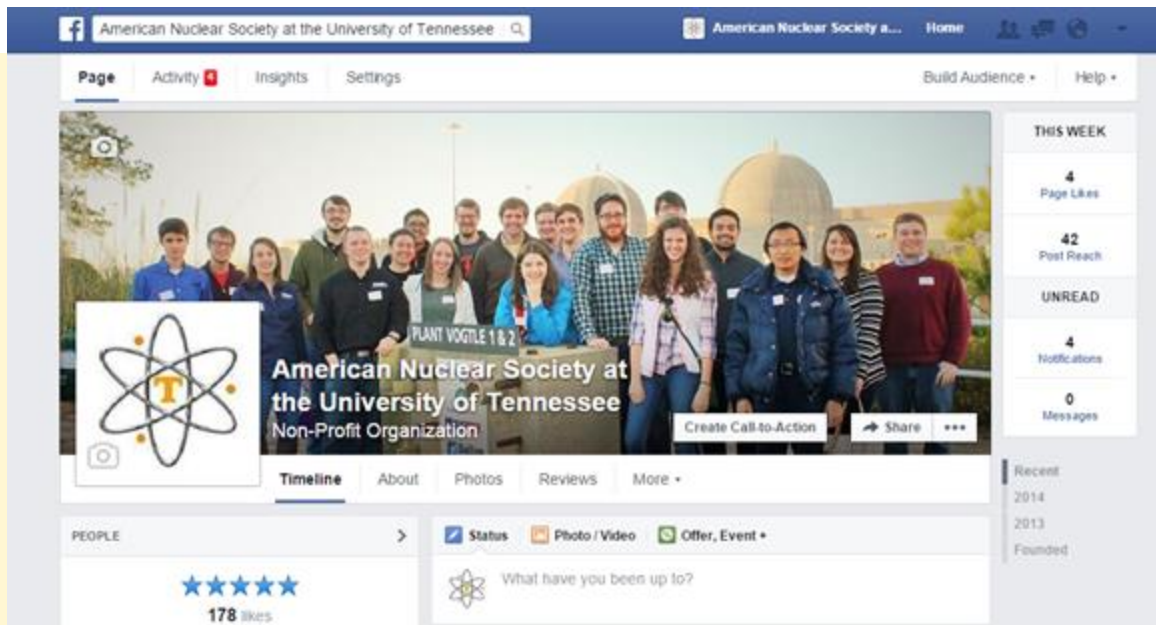


Figure 7: The Facebook page used to communicate with the student body

## What's NU

The UTK ANS coordinates with the Nuclear Engineering Department to organize a departmental weekly newsletter which informs students of future events from the department and all nuclear student societies on campus. This is just a quick outline of each day of that week in line with the department supported events that will occur. Setting Up

## ANS Meetings

### General Meetings

General chapter meetings exist in order to allow our chapter to meet together as a whole and discuss upcoming events. Not only do these meetings allow for effective communication with the membership about volunteering, educational and outreach opportunities, but it also allows the membership to come together and have a chance to communicate with each other out side of a strictly academic setting. The general chapter meetings start with food being served. Once the food is served, the officer presiding over the meeting will deliver a presentation about upcoming events, discussing comments and answering questions as needed. The meetings resolve once the material at hand has been



discussed and the meeting room has been left in clean condition for the next meeting that will take place in it. Table 2 shows a summary of the meetings that were held during the 2014-2015 year.

*Table 2: A summary of the meetings held for the 2014-2015 year*

<b>Meeting Date</b>	<b>Type</b>	<b>Speaker</b>
<b>5/2/2014</b>	Executive Meeting	Internal
<b>5/14/2014</b>	Executive Meeting	Internal
<b>8/20/2014</b>	Executive Meeting	Internal
<b>9/2/2014</b>	General Chapter Meeting	Chapter President
<b>9/23/2014</b>	Guest Speaker Meeting	Bechtel
<b>9/24/2014</b>	Guest Speaker Meeting	NRC
<b>9/25/2014</b>	Guest Speaker Meeting	Southern Company
<b>9/30/2014</b>	General Chapter Meeting	Chapter President
<b>10/9/2014</b>	Guest Speaker Meeting	Duke Energy
<b>10/15/2014</b>	Executive Meeting	Internal
<b>10/28/2014</b>	Guest Speaker Meeting	NuScale Power
<b>11/9-13/2014</b>	National Conference	Conference Speakers
<b>1/13/2014</b>	Executive Meeting	Internal
<b>1/26/2014</b>	General Chapter Meeting	Chapter President
<b>2/11/2014</b>	Guest Speaker Meeting	Enercon
<b>4/06/2015</b>	Guest Speaker Meeting	Los Alamos National Labs

### Executive Meetings

Executive meetings were held as needed in order to plan and make strategic decisions for the chapter's path forward. Examples of content from these meetings includes making preparations for the first ANS meeting of the semester, making action plans in order to improve the chapter's attendance, discussing subsidies options for students who plan on attending the student conference and arranging for student transportation to the Watts Bar nuclear generating station for a tour.

### Invited Guest Speakers

Meetings with guest speakers made the backbone of the chapter's meetings. One of the best ways for members to learn about the industry other than interning is to hear about other's experience from industry. To meet this end the chapter invited guest speakers from organizations including NRC, NuScale Power. The idea is that hosting meetings with guest speakers from a diverse set of backgrounds will allow for our membership to learn about what kind of opportunities await for them outside of the university. Additionally, the diverse set of speakers that were hosted helped paint a broad picture of what nuclear is about, thus broadening our membership's understanding of the industry. Like general chapter meetings, guest speaker meetings begin with food. Then, depending on the preference of the speaker an open conversation would be held with the membership or a more structured presentation would be given in which questions would be held until the end of the presentation. After the presentations, the members would always have the chance to talk one on one with the speaker in order to network or learn more about the speaker's line of work. Our chapter believes in leaving a room as clean or cleaner than we found it, after the conclusion of the meeting, the room is left clean for the next group that might use it.

### Coordination with Student Organizations

The UTK ANS has always had close ties with the university and other student groups. The 2014-2015 UTK ANS has had the opportunity to further previously developed relationships with the Nuclear Engineering Department, the College of Engineering as a whole, and other nuclear engineering societies such as Women in Nuclear, and Institute of Nuclear Materials Management.

### Nuclear Engineering Department

The student section of American Nuclear Society has always worked closely with the Nuclear Engineering Department. This year the UTK ANS planned the Department's Cookout Event on September 5th at Tyson Park. The entire department was invited as an opportunity for students to network with faculty and understand opportunities available to them. The event included all of the nuclear engineering student groups including Women in Nuclear, Institute of Nuclear Materials Management and Health Physics Society. Each society had booths set up on the lawn. Over 40 students and faculty participated that night enjoying the barbeque meal, outdoor sports, and discussions.

### College of Engineering (COE)

The College of Engineering holds many events such as the homecoming day BBQ, Engineers day, and the engineering expo. One event that the UTK American Nuclear Society is happy to participate in each year is Engineers Day. The event purpose is to interact with hundreds of potential engineering students from high schools across the region through discussions, project demonstrations, and exhibits. This year almost 1,500 students from forty-nine different high schools participated. In coordination with the event, three years ago the UTK ANS created the Radiation Shielding Competition in which high school groups compete with previously created radiation shields that fit within strict guidelines. The competition has been held each year since, in coordination with Engineers Day. Another event that the ANS student chapter was involved was the homecoming BBQ. We set up a booth to sell merchandise, and talk with the UTK alumni of the changes that have occurred after they graduated.

### Nuclear Engineering Societies

The UT provides many opportunities of involvement in numerous professional societies. Since many of the members of the nuclear engineering student groups overlap, effective communication among groups is key to a successful year. As the department's oldest, largest, and most inclusive of the societies, the American Nuclear Society coordinates much of the communication between sections. A unified google calendar was created this year for the department website in which all of the student groups provide dates of upcoming events. ANS also held meetings, inviting all the societies to coordinate scheduling and speakers.

## Social Events and Conferences

### EPA hearing

The Environmental Protection Agency released a proposed rule to regulate carbon dioxide emissions from existing power plants called the Clean Power Plan. This plan addresses the long term cost of carbon pollution by limiting carbon emission rates of each state. Students from the ANS University of Tennessee Student Chapter organized to attend the public hearing on the rule and voice their concern that nuclear energy was not giving due credit for having near zero carbon emissions. The students Remy Devoe, Gregory Meinweiser, and Daniel Tenpenny drove from Knoxville, TN to Atlanta, GA July 29th 2014 with the intention of giving a public statement on the plan. Their comments to the EPA asked for more credit to be given to nuclear energy sources since the proposed plan only values 6% of current nuclear generation. After giving their statements the three UTK students joined the clean energy march taking place outside of the hearing and advocated for more reliance on nuclear energy to the mostly environmental activists in attendance.

This event sparked off an even larger movement within ANS national to bring awareness to the EPA Clean Power Plan and it's impact on the future of nuclear energy. After UTK nuclear engineering students Remy Devoe and Justin Knowles released a preliminary analysis of the EPA Clean Power Plan showing that the plan does little to protect at risk plants, ANS has put out a call to action to have as many members as possible to submit a comment to the EPA. In recent days, the EPA has announced that it is reconsidering the treatment of nuclear energy in the Plan following the many comments expressing discontent with the current evaluation process. Without the actions of UTK ANS members this movement might never have left the ground.



*Figure 8: Remy Devoe at the EPA hearings*

#### ANS Winter Conference

Our ANS chapter made a strong showing at the winter meeting where quite a few of our members made the trek across the Rockies to California. Our ANS chapter decided to make the trek to California for many reasons, one of them being to compete in the ANS design competition. The result of this journey was now only our chapter taking home the honor of being a finalist in the design competition, but we also got to talk to ANS members from across the nation. In addition, the knowledge and connections forged from the ANS sessions will prove to be valuable in the growth and development of our membership.

Additionally, our chapter has plans to attend the spring student conference in Texas. Currently our plans involve subsidizing members in our chapter to attend the conference. Presently, we plan on providing transportation to the meeting and subsidizing the cost of the hotel room. We hope that these measures will help ensure that our chapter makes a strong showing at the conference meeting.





*Figure 9: Students that attended the ANS Winter Conference*



*Figure 10: Students that attended the ANS winter conference*

## Tailgate

During the semester, the ANS student chapter hosted a tailgate for the Tennessee Volunteers vs. the Florida Gators. The student chapter purchased the food, and Matthew Cook, a graduate student at UTK, barbequed 50lbs of pulled pork for the tailgate. Over fifty students attended this event, and agreed that it is a beneficial way to build comradery and outreach to those attending the game. This event has been requested to be repeated next year.

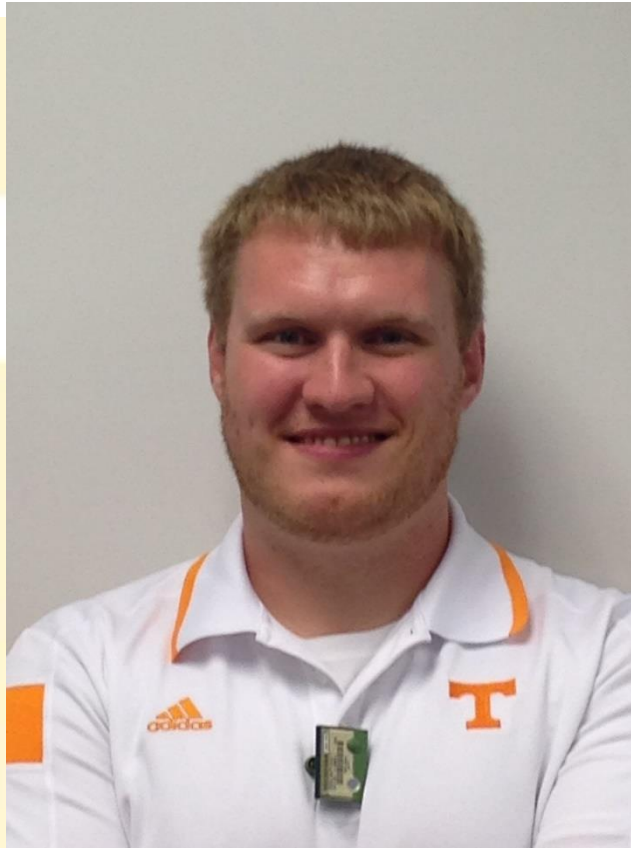


*Figure 11: Students enjoying the ANS tailgate*



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*The ANS student chapter would like to give a special thanks to Matthew Cook for barbequing the pulled pork and giving his time to support the student chapter!!*



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### [PikNuke](#)

To start the fall semester the ANS student chapter worked with the Institute for Nuclear Materials and Management (INMM) student chapter, the Women in Nuclear (WIN) student chapter, the Health Physics Society (HPS) student chapter, and the Department of Nuclear Engineering to host a “PikNuke.” This event was designed to help the student chapters meet with the incoming engineering students to help welcome them to the engineering department. The event was also a great opportunity instructors and Local ANS chapter to meet the students and communicate with them about the nuclear field.



Figure 12: Students at the Piknuke



Figure 13: Faculty and Students enjoying the Piknuke



## Public/Outreach

### Nuclear Science Week

Each year the UTK ANS student section participates in outreach activities for nuclear science week. In past years this has included teaching nuclear science through experiments to middle and elementary school children with members of the Oak Ridge/Knoxville ANS chapter. This year the outreach and public relations committees came up with new ways in which to interact with other students on the UTK campus with fun and informative ways. One new way to interact with the students was setting up a booth on the pedestrian walkway and discuss nuclear technology with the students. This improved the public understanding of the nuclear energy cycle, and after learning about the cycle agreed that it is a viable and green energy option.



Figure 14: The booth that was setup on pedestrian walkway





*Figure 15: The booth that was setup on pedestrian walkway*

### [Nuclear Engineering Department Promotional Video](#)

ANS at UTK aided in the development of a promotional video for the university's NE department. This video featured a diverse number of students in the department. These interviews disclosed why they chose nuclear engineering and what drove their passion in this field. It also contains the mission of the department and a few different opportunities. This video has been utilized in a number of presentations from the department and is a very useful tool for recruitment. The video has since been posted to the department's website.

### [Radiation Shielding](#)

During the nuclear science week, ANS hosted the radiation shielding competition. The competition challenged the high school students to develop a shield that would most effectively stop gamma rays from a Co-60 source. Nineteen teams competed in this event with team sizes ranging from 1 to 10 people. The shielding's quality was calculated by multiplying the weight of the shield to the average number of counts that a Na(Tl) detector counts. The results from the competition is shown in Table 3 and Fig. 11 shows some of the participants for this event.

Table 3: Results from the radiation shielding competition

Team	Mass (g)	Counts 1	Counts 2	Counts 3	Average	Score
<b>harrimanJ</b>	15	275	298	284	285.6667	4285
<b>Harriman D</b>	15	502	487	457	482	7230
<b>Radiators</b>	30	264	298	338	300	9000
<b>tiger team</b>	120	227	244	226	232.3333	27880
<b>West High Best High</b>	16	1906	1823	1920	1883	30128
<b>central magnet</b>	110	290	310	310	303.3333	33367
<b>harriman e</b>	15	2580	2598	2585	2587.667	38815
<b>Voltaic Piles</b>	273	152	132	155	146.3333	39949
<b>Knox Central</b>	58	1098	1250	1146	1164.667	67551
<b>Kingston</b>	338	289	294	287	290	98020
<b>Garcia's</b>	120	221	238	2018	825.6667	99080
<b>Wildcats</b>	408	273	282	285	280	114240
<b>Radiation Nation</b>	493	278	259	232	256.3333	126372
<b>Parker</b>	872	133	163	162	152.6667	133125
<b>trojans</b>	820	232	209	212	217.6667	178487
<b>Kenwood</b>	1253	195	200	231	208.6667	261459
<b>AP Chem</b>	1539	198	175	156	176.3333	271377
<b>Houston</b>	1960	192	176	189	185.6667	363907
<b>Mustangs</b>	1984	191	206	203	200	396800



*Figure 16: Jerrad Auxier helping with radiation shielding competition*

### [Vogtle Trip](#)

On January 16, 2015, the ANS of UTK took a tour of Southern Company's Vogtle Nuclear Power Plant. The participants were welcomed with a wonderful catered lunch and an introductory presentation from the tour guide and a talk from one of their Vice Presidents. The group then departed on van tours of Vogtle 1 & 2 and into the construction site of Vogtle 3 & 4. They then brought the group to the control room simulator in the training center. Participating in the demonstration of the newly updated digital I&C simulator was one of the highlights of the trip. The group was then returned to the visitor center and headed to Augusta, GA for a night one the town before returning to Knoxville the next day.





*Figure 17: Vogtle NPP tour participants at the Southern Company Training Center*



*Figure 18: ANS Vogtle tour participants at Mellow Mushroom in Augusta, GA*

### Central High

One outreach event that the ANS student chapter worked at was going to Central High School in Knoxville, TN to teach the students about nuclear energy, waste management, and nuclear security. The kids were excited to talk with us about the topics, and stated that they were interested in pursuing a job in the nuclear industry after the presentation was completed. Over 60 kids attended the presentation given, and ask many questions about the reliability of nuclear energy and about the security of the nuclear material.

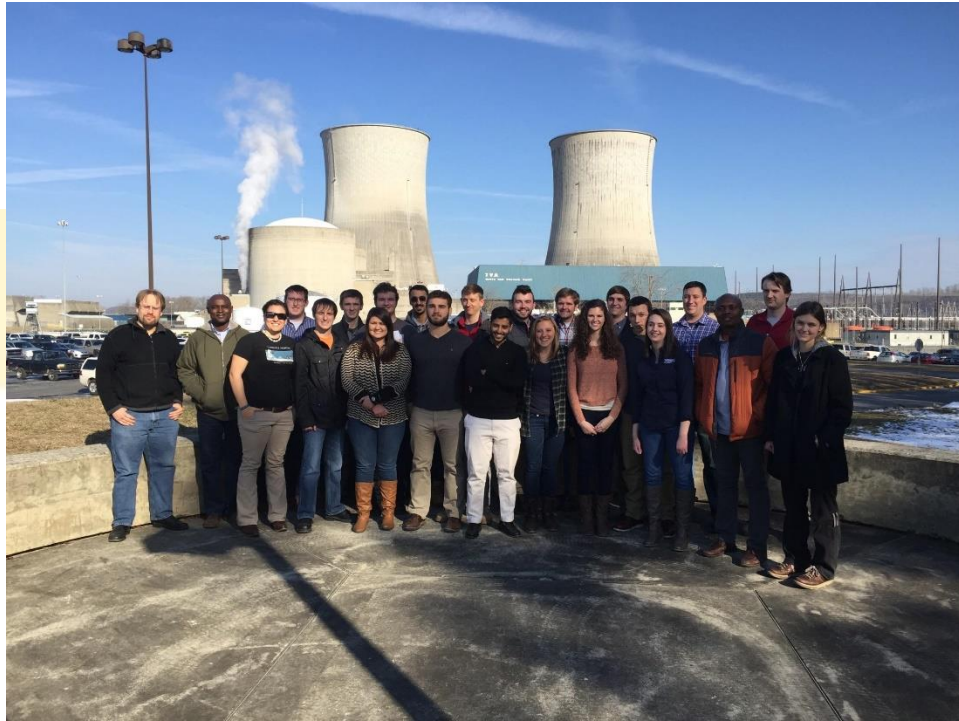
### STEM/L&M

Starting in the spring semester of 2015, the student chapter of the ANS began an initiative to forge a relationship with a STEM academy located close to the campus of UTK. The goal was to create a mentorship relationship between the younger students and ANS volunteers. Once a week the ANS students would go to the academy and offer their advice, aid, or ideas on the students current work or projects. This relationship was not strictly limited to academia, but could include everything from helping the student transition to high school or prepare them to the rigours of college, to informing them of the nuclear field or aid in. science projects.

### Watts Bar Tour

During the spring semester, the ANS student chapter was able to take a tour of the Watts Bar nuclear reactor. Roughly 35 students were taken on this tour, and were able to learn about the operations, functions, and management of a nuclear facility. Some of the students that attended this tour were not involved in the engineering field, and were attending the tour because they were curious about how nuclear energy is created. The tour consisted of taking the students inside the containment of the newly constructed unit 2, and show them the control room for both unit 1 and 2. The reactor recently had been tripped due to loss of vacuum on their condenser; therefore, the students could observe how the reactor operators handled during an emergency situation. The students were also shown the turbine, steam generator, and the simulator that are at the Watts Bar facility. The students enjoyed the tour and are wanting to attend the tour that Watts bar is going to have in the Fall.





*Figure 19: Part of the group of students that attended the tour*



*Figure 20: Some students that attended the Watts Bar trip*

### Alumni Week

The ANS at UT set up a booth in the engineering lawn prior to the UT Alumni football game. The entire week was full of events for current students and past alumni, all leading to the game on Saturday. The ANS table offered merchandise to visitors and students attending the game. Representatives at the table also had good discussion with many previous members who graduated in years prior.

### Summer Freshman Recruitment

Throughout the summer of 2014, the ANS of UT represented the NE department at the incoming freshman department and society fair. Every Tuesday and Thursday for six weeks, representatives showcased the department using various informative flyers, statistics, and demonstrations such as a cloud chamber and uranium glass. Many incoming freshman stopped by the booth and left more enthused and passionate about their decision to enter into the field

### Vendors Meeting for HPCS

UTK ANS and HPS members joined together to attend the annual East Tennessee Chapter of the Health Physics Society Vendor's Meeting. The meeting is held to commemorate past, present, and future members in the ETCHPS community as well as give radiation protection and measurement companies a forum to advertise their services. UTK ANS members helped with manning the University of Tennessee Department of Nuclear Engineering outreach table. This gave our members an opportunity to connect and network with professionals in the field of radiation safety as well as learn about job opportunities in health physics. The evening was marked with socializing, a banquet dinner, awards and honors for ETCHPS members, and raffle from each of the vendors tables. The new UTK HPS president was also introduced to the ETCHPS executive committee during the banquet.

## ANS Student Conference

This year 15 students attended the ANS student conference that was hosted at Texas A&M. The UTK student section supplied travel for 10 of the students that attended the meeting, and helped supply the 15 students with lodging while they at the meeting. Thirteen of the students presented either podium presentations or poster presentations, and the UTK student section claimed 8 of the awards given at the conference. The UTK student section is expecting more students to attend next year ANS student conference by gaining support from instructors to encourage students to attend the meeting.



Figure 21: UTK Students riding to the ANS student conference





*Figure 22: UTK student presenting research at the ANS student conference*



*Figure 23: UTK Students enjoying the ANS student conference*



## Officers Retreat

Another new event that the UTK ANS hosted was an ANS officer's retreat. This event allowed the current officers to meet with the newly elected officers to discuss improvements that could be done to the UTK ANS chapter. During this meeting, strategies were created to improve organization and delegation of work before the fall semester. Also officers and representatives were selected to focus on certain outreach events or tours that the UTK ANS is wanting to participate in. This will insure that the 2015-2016 year of the UTK ANS continues to improve the society and increase the membership body.



*Figure 24: Current and newly elected officers at the retreat*

## River Rafting

This year was the first year that UTK ANS hosted a rafting trip on the Pigeon River with local company called Rafting the Smokies in Hartford, TN. Being located next door to the Great Smoky Mountains makes this a very convenient social event. White water rafting is a thrilling ride that requires courage and teamwork. It was a great way to not only build communication and comradery among the members, but to make memories that will last a lifetime. Our chapter had 10 attendees this year and hope to increase this in the years to come. Everyone met at the university and carpooled to the destination. After splitting into groups of three, suiting up, and being briefed on safety procedures, everyone loaded the buses and headed upstream. Each team unloaded the rafts and readied them in the river. After launch, the guide gave orders on when and how to row. Each raft has to row as a team, otherwise the raft will be led astray. Rafting down the river gave each team time to bond over the exciting experience as well as

shared stories. The pictures taken by the company during the trip can and will be used as promotional material for chapter outreach and promotion here at the University of Tennessee.



*Figure 25: ANS members enjoying the rafting trip*

## Final Remarks

The 2014-2015 academic year has been very productive for the University of Tennessee American Nuclear Society, full of growth and new ideas. We look forward to what the newly elected officers will do to continue the growth of the UTK ANS chapter. Over the 2014-2015 year the ANS student chapter has seen exponential growth, and increased participation from the members at ANS hosted events. The members have commented that under the new leadership, the ANS student chapter is an exciting society to belong to, and that all engineering majors should have membership in the UTK ANS student chapter.