PI TAU SIGMA ANNUAL CHAPTER REPORT

2010-2011

Tennessee Sigma Nu

Report prepared by Jeff McGehee, Sigma Nu President 2010-2011

The Tennessee Sigma Nu officers of the 2009-2010 academic year started a push in the right direction which culminated in being recognized as one of the most improved chapters at the 2011 PTS National Convention. Though the chapter's improvement was not officially recognized until the convention in February, the officers of the 2010-2011 academic year had already taken note of the new direction Tennessee Sigma Nu was headed. During the 2010-2011 academic year at Tennessee Tech, the Tennessee Sigma Nu chapter initiated over 25 new members, held a panel discussion on graduate school, tutored scared and bewildered underclassmen, made a new chapter website, spent a Saturday making Tennessee Tech's campus more beautiful, provided a "key polishing hour" for initiates, raised almost $400 for charities, sold out of chili and hot chocolate, sold over 50 hamburgers and hotdogs, helped TTU's ASCE chapter host the ASCE Southeast Student Conference, gave advice to local high school students concerning science projects, began creating an alumni database, held two faculty and staff appreciation car washes, held a year-end banquet for all members and ME faculty, and most importantly, updated the chapter bylaws. New activities and a push towards better chapter organization helped new initiates understand the culture of service and leadership that exists in Pi Tau Sigma

Initiations

During the 2010-2011 academic year, the Tennessee Sigma Nu chapter performed two initiations. The first took place at the end of the fall semester on December 9, 2010. This was the largest initiation in several years with a total of 21 new members. The second initiation was performed at the end of the spring semester on April 27, 2011 where six new members were initiated.

At the beginning of each semester, a list of eligible students is created. These students represent the top 25-33% of the undergraduate mechanical engineering student body who have attained junior to first semester senior status based on academic hours earned. This list is presented to the mechanical engineering faculty where individuals are recommended by the faculty based on the student's merit and integrity. At the beginning of each semester, invitations are created and delivered to potential initiates in a public manner such as a class lecture. The public announcement helps to celebrate the student and publicize the society.

Once invited to be a member of Pi Tau Sigma, an initiate is required to perform the following requirements before the time of the initiation:

1. Attendance of meetings: Initiate must attend at least 80% of meetings held over the semester unless having prior consent to miss.

2. Shine Pi Tau Sigma key: Initiate must make sufficient effort shining the Pi Tau Sigma key.

3. Signature list: Initiate must attain 65% of the active members' signatures and 75% of the mechanical engineering faculty's signatures.

4. Service hours: Initiate must perform at least eight hours of tutoring and six hours of other Pi Tau Sigma service events to be discussed in further detail under Chapter Details.

5. Dues: Initiates must pay national dues and chapter dues totaling $60.00.

6. Attendance of initiation: Initiate must attend and perform the rituals associated with the legacy of Pi Tau Sigma at Tennessee Tech.

If an initiate begins the initiation process but is unable to meet all the requirements, based upon the decision of the current Pi Tau Sigma president and faculty advisor, the initiate may be invited to finish the requirements the following spring or fall semester.

During the fall semester initiation, refreshments are served prior to the official initiation ceremony and rituals. For the spring semester initiation, the fall and spring initiates are invited to attend dinner with a speaker who is typically a Tennessee Tech graduate and Pi Tau Sigma member. Dress for the initiations is business casual. During both semesters the initiates turn in their shined keys and signature sheets. Initiates are then led into a dark room lit by several candles. At the front of the room, the officers and pictures of the Pi Tau Sigma crest and key are found at a table covered in murray and azure table clothes. The rites and rituals of Pi Tau Sigma are read to the initiates by the president and vice-president of the Sigma Nu chapter. The members pledge to uphold the standards of Pi Tau Sigma and the qualities associated with being a respectable engineer. The new members then sign their names into a leather-bound book that has been signed at Tennessee Sigma Nu initiations for decades.

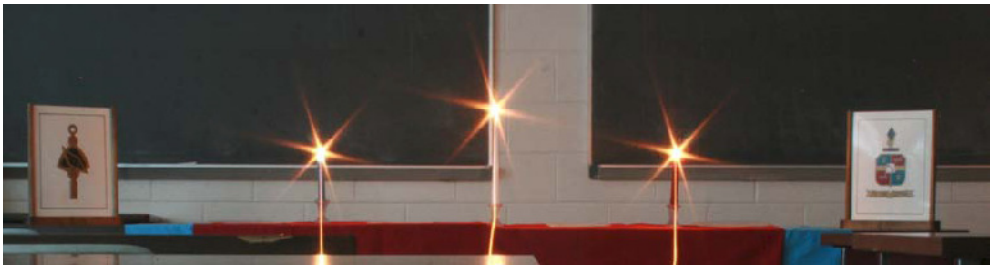

Figure 1: Initiation Set Up

After the ceremony and rituals, new members, officers, speakers, and the faculty advisor celebrate the end of the successful semester over dinner or refreshments. The invited alumni

speaker then presents his or her topic to the people present. Previous speakers include employees with NASA Marshall Space Flight Center and Arnold Air Force Base Engineering and Development Center. After the presentation members are allowed to talk with other members and the speaker. New members are thanked for their commitment to Pi Tau Sigma and encouraged to continue to stay active with the society even after reaching active member status.

Chapter Activities

Initiates and members were offered a variety of service events to participate in for the 2010-2011 academic year. In previous years, requirements for new initiates were to shine the key, attain signatures, create a poster over an engineering topic, and attend the handful of meetings throughout the semester. Members typically did not participate in the society after initiation. Most of the 500 mechanical engineering students did not know about Pi Tau Sigma, the mechanical engineering honor society. However, as mentioned previously, this changed with the election of the 2009-2010 officers.

There were new goals and objectives set by last year's officers to help improve Tennessee Sigma Nu. These goals included establishing stronger member connections, increasing the publicity of Pi Tau Sigma within the department and on campus, offering an array of service opportunities and educational seminars for members and other students, and adding a variety of fundraising activities. This year's officers felt that these goals were integral to the success of the chapter every year, so the activities of the chapter for the 2010-2011 academic year were planned with these goals in mind. It was seen by the officers that in order to continue forward progress in all of these areas, there would have to be improvements in the chapter's organization and record keeping. This involved extensive collaboration between the officers and long hours of work behind the scenes. However, the officers did not simply limit their duties to such behind the scenes type of work. Each one played a part in leading and organizing various chapter events as well.

Officer Activities

As mentioned, this year's chapter activities included many tasks that involved the officers alone. The most important of these tasks was the creation and implementation of a living set of chapter bylaws. Like many older chapters of Pi Tau Sigma, the first set of chapter bylaws was written decades ago. Through the changes of members, officers, and advisors, paper records become lost. Consequently, the chapter has been operating based on good faith in the officers and advisor, and a memory of how the bylaws once were. This made it difficult for new officers each year, because they were forced to rely on the faculty advisor alone for advice concerning officer responsibilities. Thus a decision was made to acquire an old copy of the chapter bylaws, propose changes, and type an electronic copy that would be easily available for reference. The changes to the bylaws reflected the ways that the chapter currently operates. They also included some new rules and officer positions that did not previously exist. The changes were brought

before the chapter in a meeting, and were adopted with a unanimous vote. Robert's Rules of Order were used in the amendment and voting procedures. Because of these changes, the chapter will be able to stay organized and operate efficiently as it grows.

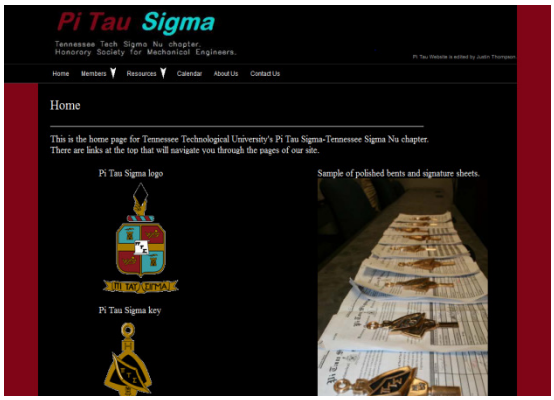

Figure 2: New Website

Though the changes to the bylaws will probably have the largest affect on the chapter, many other improvements were made by the 2010-2011 officers. The treasurers, Adam Cox and Emily Hancock, created a running electronic spreadsheet to handle the budget. This spreadsheet has been passed to next year's officers. The Alumni Relations officer, Hunter Bailey, began work on an alumni database that will be passed to next year's officers. Justin Thompson, the webmaster, created an entirely new chapter website that includes a calendar of events, officer information, a downloadable copy of the new bylaws, and much more. The president, Jeff McGehee, created a library of electronic files that were an integral part of the chapter's operation throughout the year. The library included items such as advertisement fliers, spreadsheets for keeping track of initiate requirements, banquet programs, and initiate invitation letters. All of these accomplishments by the officers of the 2010-2011 academic year will help to improve future operations of the chapter so it can continue to grow.

Events

This year, Tennessee Sigma Nu held many events for members and initiates alike. These activities were designed to help improve the visibility of the chapter in the department, on campus, and in the community, as well as provide opportunities for initiates to complete their required service hours. The officers looked for opportunities to collaborate with other organizations at the university as well as the community.

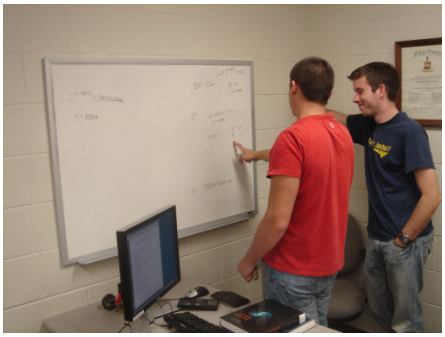
Figure 3: PTS Tutoring Lounge

An ongoing service opportunity that takes place throughout the year is the tutoring of lower-division courses for engineering students. This tutoring service is run out of a room in the mechanical engineering building that is casually referred to as "the tutoring lounge". All initiates were required to make themselves available to tutor for eight hours in the tutoring lounge throughout the semester. The tutoring lounge is also teeming with active members, who have been found tutoring more advanced subjects such as heat transfer, machine design II, and finite element methods. Because of this atmosphere, initiates are encouraged to spend more time in the tutoring lounge because it is a good way to get to know current active members.

Members and initiates are reminded that the benefits they reap in the workforce or their continued education are a direct result of the hard work of the faculty and staff in the college of engineering and the mechanical engineering department. To help show the chapter's appreciation for these devoted individuals, a faculty and staff appreciation car wash was held in the fall and spring semesters. This event was started in the spring of 2010, and the officers decided it was a great success and should be continued through this academic year. Faculty participation varies, but there is never a shortage of members and initiates, which leads to a turnaround time of less than ten minutes per car. Tennessee Sigma Nu has also made it a priority to participate in various events sponsored by the college of engineering and the mechanical engineering department at Tennessee Tech. In the fall the chapter helped the department set up a display in the college of engineering homecoming tent, and helped explain to freshman why they might like to be a mechanical engineer at the university's major fair. In the spring, the chapter helped Tennessee Tech's chapter of ASCE host the ASCE Southeast Student Conference. Members and initiates volunteered to help with parking and unloading of concrete canoes at five o'clock a.m., and also helped set up and serve lunch to almost 1000 civil engineering students from schools across the southeast.

Figure 4: Faculty Appreciation Car Wash

Another partner that Pi Tau Sigma teamed up with this year was the Millard Oakley STEM Center on the TTU campus. The STEM Center focuses on educating K-12 students about the various STEM fields through fun and interactive activities. Pi Tau Sigma provided help to the STEM Center in various ways including making instructional slide shows for the various learning activities, helping fourth graders build "robotic" hands from cardboard, string, and rubber bands, and helping high school students formulate and refine their plans for a science project. The relationship that was built this year between Pi Tau Sigma and the Millard Oakley STEM Center will provide many more opportunities for the Tennessee Sigma Nu chapter to have an impact in the community and in the STEM fields as a whole.

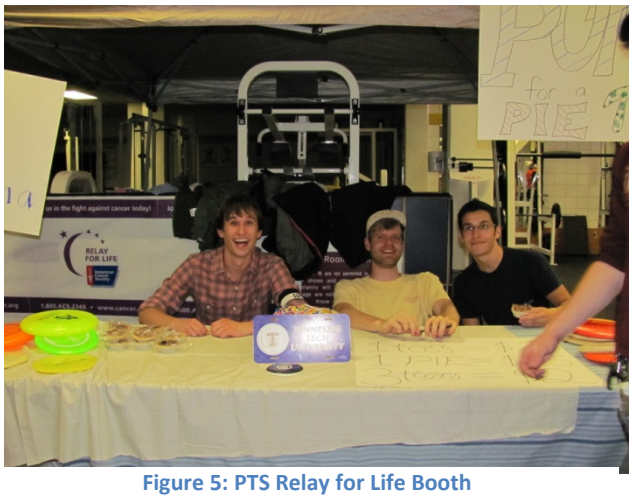

Figure 5: PTS Relay for Life Booth

While most of the chapter's service events involved university sanctioned activities, Tennessee Sigma Nu also made it a point to reach out and participate in larger community events. In the fall, the chapter raised approximately $350 for the Alzheimer's Memory Walk, and had approximately five members present through the duration of the event which was held on October 30, 2010. In the spring, the chapter raised almost $50 for the Relay for Life by selling homemade pies through the duration of the all-night event. Tennessee Sigma Nu is proud of the donations

that were made on its behalf to these organizations, and will make it a priority to continue this type of community involvement in the future.

Figure 6: TN Sigma Nu T-Shirt

So far, all of the events discussed have shown what Tennessee Sigma Nu has done for others. But what has the chapter done for itself? In the fall, an official chapter t-shirt was designed and sold to the members and initiates, almost 40 shirts have been sold to date at a profit of over five dollars per shirt. Also in the fall, the initiates teamed up to make chili and hot chocolate to sell to students during the university's "dead week" just before finals. This brought a meager profit, but every dollar helps keep the chapter moving forward. In the spring, the chapter held a cookout during dead week. This was the 2nd annual PTS Spring Cookout, and hopefully it will continue in the years to come. On a rainy Thursday, members and initiates grilled over 50 hotdogs and handmade hamburgers, prepared various homemade desserts, and sold out of all of them by the end of lunchtime. The chapter profited almost $100 from this event. All of these fundraising events not only allowed the chapter to donate to the previously mentioned charities, but also allowed for the officers to treat the members and initiates with pizza at almost every chapter meeting and a year-end banquet that will later be discussed in further detail.

Figure 7: PTS Spring Cookout

Aside from fundraising events, Tennessee Sigma Nu provided several events for the direct benefit of its members and initiates. The chapter held two panel discussions concerning graduate school. The panel consisted of mechanical engineering graduate students who gave advice and shared their graduate school experiences. The chapter also hosted a speaker from University of Tennessee Space Institute who presented about educational opportunities available to a mechanical engineering graduate at the institute near Tullahoma, TN. A new service that was provided in the fall and spring for initiates was a "key polishing hour". This involved opening the mechanical engineering department's machine shop to the whole of the initiate class and discussions and guidance from senior members concerning polishing procedures and techniques. The initiates seemed to find this very helpful, and typically stayed longer than the allotted hour to continue polishing their Pi Tau Sigma key.

Three officers of Tennessee Sigma Nu attended the 2011 National Convention in Chicago. The President, Webmaster, and Alumni Relations Officer traveled to Chicago by car, and arrived in time for registration on Friday afternoon. They attended the Infrastructure and National Officers breakout session and participated actively in the Plenary Session. They also enjoyed tours of the various facilities of UIC and the social event on Saturday night. The attendees agreed that it was exciting to have an impact on the operations of the National Chapter, and fun to meet students from other schools who have similar priorities and ambitions. Upon return, they were encouraged to continue working hard to meet the goals that had been set at the beginning of the fall semester. The attendees also encouraged returning members and initiates to try to attend the convention because of the many benefits it offers.

The academic year for Tennessee Sigma Nu closed with a year-end banquet that followed the initiation of the spring semester's initiates. The event was held in the lobby of the state-of-the-art Millard Oakley STEM Center. Mechanical engineering faculty and staff, previous faculty advisors, current members, and new initiates were in attendance. After the opening remarks by the president, Jeff McGehee, dinner was served. As the meal was nearing its end, Dr. Michael Allen, the speaker for the evening, was introduced. Dr. Allen is currently a math professor at Tennessee Tech, and just recently graduated with his B.S. in Mechanical Engineering in May. He was also initiated into Pi Tau Sigma at the spring initiation. His speech described his view of the relationship between engineering and mathematics and how engineers and mathematicians must work together to shape the future. After the speech, Dr. Chris Wilson, the chapter faculty advisor, shared some closing remarks and Dr. Sally Pardue, Director of the STEM Center and former chapter faculty advisor, led the singing of "Glory, Glory Dear Old Thermo". A good time was had by all.

Closing Statements

This year, the Tennessee Sigma Nu chapter of Pi Tau Sigma followed the upward trend that was set by last year's officers. Successful activities that began last year were continued this year, hopefully pushing them towards the title of "traditions". Many new activities were provided for the members and initiates, and a solid base of fundraisers was created. The chapter built relationships within the university and the community that will provide future opportunities for Tennessee Sigma Nu to continue its involvement. With the increase in activities, came a need for better organization. This need was met as well, and the new bylaws will stand as a cornerstone in the foundation that is being built to allow Pi Tau Sigma to become one of the most influential organizations on the campus of Tennessee Tech and the community of Cookeville.

The officer elections brought a new President: Jim Leverette, Vice President: Chris Loftis, Secretary: Robert Griffin, Webmaster: Ryan Rios, and Alumni Relations Officer: Chris Byers, and the Treasurer, Emily Hancock, was elected to serve a second term. These officers have been given all of the necessary tools to continue the path being travelled by the chapter. They have shown interest in the organization from the beginning of their initiation process and have bought into the vision of the future that was created by the officers before them. The 2010-2011 officers are proud to have been a part of such a successful year and even prouder to have provided the new officers with the necessary materials to begin next year headed in the right direction.