PI TAU SIGMA ANNUAL CHAPTER REPORT

2015-2016

Cal Poly San Luis Obispo Phi Psi

A. INITIATIONS

The Cal Poly San Luis Obispo Phi Psi Chapter held two initiations, one in December and the other in April for this academic year which added 20 new members to the chapter. We selected our initiates based off of the following criteria:

- Initiates are required to have Junior standing
- Initiates must be in the top 25% of their class as Juniors or top 35% of their class as seniors

Upon pledging, new initiates to Pi Tau Sigma must complete the following requirements before being admitted into Pi Tau Sigma:

- Initiates must participate in 10 hours of community service events and/or machine shop time (machine shop time helps satisfy the 10 hour prerequisite required for Senior Project)
- Initiates must design and assemble their Pi Tau Sigma bent consisting of a key and plaque

Upon paying initiation dues, initiates are provided with a key to polish and the dimensions for the size of the plaque. Initiates are then asked to design and create their own plaque in order to assemble the bent. Our chapter has found that the level of effort and creativity put in by initiates to build their bent has increased significantly over the past two years as a result of allowing members to create their own plaque. Next year, we will have initiates cast their own keys as well (metal casting lab is taken by the majority of MEs at Cal Poly) so that the entire bent is designed and built by each new member. We think this change aligns well with Cal Poly's "Learn by Doing" approach to education.

A banquet dinner was then held where all of the new members and officers were invited to celebrate their admission to the honor society.

B. CHAPTER ACTIVITIES

This year, the Phi Psi officer board focused on increasing our active involvement in the chapter. We hosted a company information session, held a hands-on workshop, organized a company tour, participated in community service and outreach opportunities, and attended the national convention at USC.

Information Session

Our chapter hosted representatives from Lawrence Livermore National Laboratories (LLNL) during winter quarter to speak about the National Ignition Facility (NIF) where cutting-edge laser research is done. LLNL invited our PTS chapter for a future tour of NIF.

Hands-On Workshop
Cal Poly Phi Psi again held a hands-on CAD workshop in Fusion 360 presented by Autodesk. Members had the opportunity to learn about new software and gain real-world skills during this fall quarter event.

Company Tour
For the first time in recent memory, our chapter organized a company tour. Cal Poly members visited Daniels Woodland, a local theming and design company where they specialize in creating custom work ranging from elaborate tree houses, to sporting goods store shooting galleries, to Hollywood/Disney movie props, and theme park sets. Members learned about how this company approaches design work and manages many diverse projects. The tour was a great success and future company tours are being planned for next year's activities.

Tutoring
Cal Poly Phi Psi has begun a partnership with the local high school in San Luis Obispo to offer weekly tutoring to students in math, science, and other subjects. This year our chapter started tutoring one to two times per quarter, but next year we aim to increase that participation to once a week for each of the ten weeks of the quarter. Tutoring was typically organized for an hour and a half, but members were encouraged to come for any portion of that time. A few larger tutoring sessions were also attended when the high school would organize a three hour "study-a-thon" for its students the week before their finals.

Building an Engineer Day
Every year, the Society of Women Engineers at Cal Poly hosts an event called Building an Engineer (BAE) Day during the fall and spring quarters. BAE Day is an event where children in 2nd - 6th grades come to the Cal Poly campus to learn about engineering through student club organized activities. The Society of Women Engineers ask other engineering clubs and honor societies to host engineering-based activities to encourage kids to become interested in engineering.

Our chapter's activity was to have the children build balloon powered race cars out of simple household items such as Popsicle sticks, lifesavers, and straws. This activity was preceded by a lesson about the engineering design process. Once the children had built their racers, they were encouraged to race their vehicles against each other. We then asked the children why they thought certain vehicles were faster than others and how that insight applied to engineering and their design choices. Phi Psi chapter members were encouraged to attend and participate in guiding the children while they were building their racers.

Convention Participation
This year, the Phi Psi chapter sent one representative to the annual convention at USC. The representative learned much about how the organization is run on a national level. It is our chapter's goal to send at least two members to next year's convention.

C. OTHER

Partnerships and Collaboration

The Phi Psi chapter has continued to partner with other clubs on campus such as SWE and ASME to host events and organize activities. We have also made progress toward increasing our involvement within the mechanical engineering department and within other departments as well. One such example of this collaboration is the planned metal casting of PTS keys, which is being organized within the industrial and manufacturing engineering department. We will work to grow these relationships in the years to come.