PI TAU SIGMA ANNUAL CHAPTER REPORT

2015-2016

University of Florida

Florida Sigma Omicron

A. Initiations

Initiates are chosen from the top 35% of students in the mechanical engineering department who are in their third year or have the equivalent 90 credits. For students who classify as juniors, their status is determined for the top 25% of students who have completed four semesters (two years) of course work. For seniors, their status is determined from finding the top 33% of students who have completed six semesters (three years) of course work. These eligible candidates are contacted by the current president and are informed of their selection and invited to an introductory meeting. Our chapter receives the list of candidates during the first month of the semester from the administration of the UF College of Engineering.

Candidates who attend the introductory meeting are briefed by the President, Vice President, Secretary, Treasurer, and other officers with a presentation on Pi Tau Sigma. This presentation outlines our chapter's requirements for membership and includes examples of how the members interact with each other, and with the engineering community as a whole. Officers introduce themselves and describe their roles in the chapter. All candidates who attend this introductory meeting, who attend events, or who send an email of interest are recorded and are added to an initiate list serve. Their attendance is recorded throughout the semester at all events held.

Initiates are required to go to six events over the course of the semester, but are encouraged to attend more and socialize with the other members and initiates. They must attend: one Pi Tau Sigma sponsored lab tour, company information session, or related activity; one service project; one fundraising event; one chapter social; the end of the semester Kick-Ball game, and the initiation ceremony. Initiation is mandatory and is usually held one week before final exams. If an initiate cannot attend a certain event and would like to substitute another, e.g., an initiate cannot attend the last service event of the semester and instead wants to attend two lab tours; they must obtain permission from the president, vice president, or the membership chair. A one-time dues payment is required before the initiation ceremony. If any of the requirements are not met or if the initiate cannot attend the initiation ceremony, they must wait until next semester to be initiated, assuming they are still eligible. When an initiate pays their dues, they receive a Pi Tau Sigma bent. Initiates are encouraged to polish their bents. At initiation, the initiate who has the best looking bent, as voted by the officers, receives a prize.

The initiation ceremony follows tradition. Initiates are brought into a conference room with the current officers at the front of the room. A table decorated with Pi Tau Sigma coat of arms and other memorabilia is in the middle of the room. The president and vice president follow the Pi Tau Sigma initiation handbook and describe the coat of arms and the values of Pi Tau Sigma. Once the initiates pledge to uphold the ASME code of ethics, they are congratulated and welcomed as members. To signify this, they are taught the chapter's secret handshake and each initiate shakes hands with the officers. At the end of the spring semester's initiation, officer elections are held. All members,

including those who were just initiated, can run for a position. Only current officers can run for the president and vice president offices.

Our chapter held two initiations this year. The fall initiation was held on Thursday, December 10th and saw sixteen new members added to the Sigma Omicron chapter. The spring initiation was held on Thursday, April 22nd and saw one new member initiated. The fall initiation saw an increase of 128% in comparison to the previous year. Of the seventeen new members, five of them ran and were elected to be officers for the next academic year. The leaving officers welcomed and congratulated the new officers.

B. Chapter Activities

The Sigma Omicron chapter is part of many activities and events that promote involvement in the mechanical engineering department and that introduce students to excellent opportunities for their future. The chapter allows for the members and initiates to work with high-achieving students from the other engineering societies, network with professors to gain research opportunities, as well as members from industry to gain internships and full-time jobs. Additionally, our chapter gave back to the department, UF community, and Gainesville community by providing department wide events and hours of community service work.

Community Service

Community service events are either individual or in collaboration with other engineering societies. One such collaboration is GatorTRAX, a program that introduces many engineering related skills to elementary, middle and high school students. The Sigma Omicron chapter works together with the Florida chapter of Tau Beta Pi in teaching these young minds new concepts. Officers and members

explain to the students, through physical examples, basic concepts of physics, such as velocity and acceleration. This past year, members of Pi Tau Sigma provided support to the American Society of Mechanical Engineers to teach the students about kinetic and potential energy. There were approximately fifteen Pi Tau Sigma members in attendance as well as ASME and Tau Beta Pi volunteers. Over 45 kids participated in the event.

The annual E-Fair is a well-recognized event at the University of Florida. At the E-Fair, engineering groups from all departments come out and demonstrate the fundamental ideas of their core learning to elementary and middle school students, as well as faculty, visiting alumni and fellow students. Pi Tau Sigma presented the air cannon and air vortices activities at this event, much to the delight of the students. 1,500 students attended the two day event to learn about the different engineering activities.

Departmental Service

This year, the Mechanical and Aerospace Engineering Department implemented Peer Advising to improve departmental advising. Pi Tau Sigma members were requested to serve as advisors by the department chair. Pi Tau Sigma members rose to the call and fifteen of them served as Peer Advisors this year. Peer Advisors guide students in the MAE Department through class scheduling, internships, and extracurricular activities. The feedback from students has been overwhelmingly positive and often students say this is the "best advising I have received at UF".

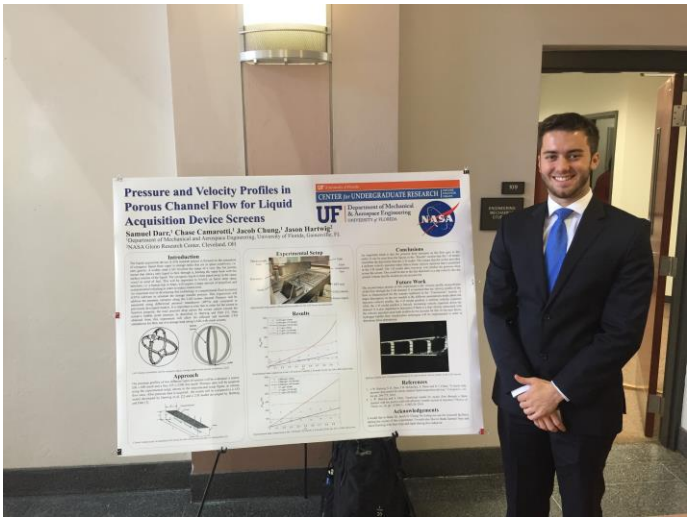
This year Pi Tau Sigma took over the responsibility of leading and organizing the "Intro to Engineering" class for the Mechanical and Aerospace Department. This course is for incoming freshman who are interested in engineering but are unsure of which discipline is best for them. Pi Tau Sigma organized and led a weekly presentation and hands on demonstration to show the students what mechanical engineering entailed. With Pi Tau Sigma taking over the class, there was a dramatic increase in participation and interest in the mechanical engineering discipline.

In the spring, Pi Tau Sigma hosted two information sessions with Sandia National Laboratories and with Universal Studios. Both events included talks and presentations from employees of each company. The speaker at the Universal Studios information session was the Vice President of Universal Studios who was a Mechanical Engineer as well as member of Pi Tau Sigma at his alma mater. Both information sessions allowed for time to speak with the presenters as well as time to network with human resources personnel. Each event was well attended by Pi Tau Sigma members as well as ASME members and was very enjoyable and informative.

The MAE Undergraduate Research Symposium is an annual poster presentation event in which undergraduate students can share their research with faculty, students and notable members of the External Advisory Board. This event is coordinated with the UF Mechanical and Aerospace Department annual Awards Banquet. This year, the departmental chair wanted to keep the momentum going for the Symposium and have at least 15 presenters. The chapter responded to this goal, and the presenter participation totaled 14 presenters. Invitations for the symposium were sent out through the department undergraduate list serve, flyers were posted in every engineering building, and announcements were made in class. All interested undergraduates received a PowerPoint poster template where they would describe their research topic by giving the background, problem statement, and current and future work of the project. Once all of the posters were completed and returned, the officers printed and laminated the posters for the students.

The Symposium was held in the rotunda of the main engineering building on campus, expanding visibility of the event to the entire College of Engineering. A panel of five judges was created from the External Advisory Board and these members spoke to each presenter and reviewed their work. After deliberation, three winners were selected and were awarded not only an invitation to the MAE

Awards Banquet, but were also awarded cash prizes. The cash prizes were $250 for first place, $150 for second place, and $100 for third place. The event was considered a great success and was highly regarded by not only the faculty and Board members, but also among the students who attended. These students expressed much anticipation for next year's Symposium, giving them renewed inspiration to conduct their research.



Several of our chapter's officers attended the annual Mechanical and Aerospace Engineering Department Banquet at the University of Florida. These officers represented our chapter and presented the Outstanding Alumni Awards to distinguished guests. Several of the Pi Tau Sigma members were also honored during the event, with our Vice President receiving the MAE Outstanding Senior Award in Mechanical Engineering as well as our Treasurer, Membership Chair, Service Chairs and Initiates receiving departmental scholarships.

Social Events

This year, the Sigma Omicron chapter brought together the MAE engineering societies of AIAA and ASME, along with the faculty of MAE, by hosting the fourth annual MAE kickball tournament. A little friendly competition along with plenty of food and drinks is always a fun time for all of the members to get to know each other. The tournament was played on the intermural softball fields on campus and consists of three rounds of playoff style single elimination. Around 25 members for all of the clubs participated in the event. This year, we were happy to have faculty attend the event. The winner of the event this year was ASME.

In addition, our chapter holds many social events for the members. Our social events range from frozen yogurt at the local Mochi frozen yogurt to spending the morning hiking at Paynes Prairie or participating and winning trivia at local restaurants. These events are always well attended by members, officers, and initiates. This academic year in particular, initiates had great opportunities to get to know the officers and the social events were very enjoyable. The end of semester Kick-Ball game is another great social event for the initiates to get an opportunity to beat the officers who they have worked with all semester.

Fundraisers

Our largest fundraiser is through the departmental polo sale. The department donates the funds for the Sigma Omicron chapter to purchase the polos through a local design company. Thus, all of the profits raised in the sales are used to fund all of the events throughout the semesters. These polos consist of the UF Gator Engineering Logo and have the words Mechanical and Aerospace Department under the logo. Students purchase these polos to wear to info sessions and during internships. This year we brought in a new style and design of polos as well as allowed for the use of credit cards to purchase the polos. These two changes increased sales dramatically leading to strong fundraising in the academic year.

National Convention

This spring, the Sigma Omicron chapter sent two members and four officers to national convention at USC. All of the attending members enjoyed the experience and brought back ideas which will help with growth of the UF chapter. The members participated in all of the events and attended the career showcase event as well as enjoyed facility tours of companies such as SpaceX.

Member Communication and Meetings

Members of the Sigma Omicron chapter receive email updates of events happening in the local mechanical engineering department. Graduate students and professors contact our advisor and ask for any Pi Tau Sigma members who are interested in working in research workshops or labs. Members are invited to seminars and department lectures being held by professors and those working in the mechanical engineering field. Our officers arrange tours of engineering professors' laboratories that are open to all members and initiates. These laboratory tours are a great way for members to meet professors and have a chance to talk to them about research opportunities.