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PI TAU SIGMA FLORIDA SIGMA OMICRON

Chapter Summary 2019 - 2020

Table of Contents

Initiations 1

Selection Process 1

Initiation 2

Chapter Activities 3

Service Events 3

Socials 4

Intro To Engineering 5

Research Symposium 6

Polo Sale 6

Lab/Company Tours 6

Kickball Game 7

A. Initiations

Selection Process

Florida Sigma Omicron chapter of Pi Tau Sigma takes great pride in our initiates each semester and thus go through great lengths to ensure we are initiating the best possible initiates. Our selection process begins before the semester even starts as the Secretary gathers a list of eligible names from our department. Our standards have always been the set standards listed by the national PTS organization; any undergraduate student who's class rank is in the upper 25th percentile and who's GPA is at least above 3.25/4.00. Now at The University of Florida to be in the upper 25th percentile that usually corresponds to a GPA around 3.79/4.00.

Once the eligible students have been selected, they are all sent a congratulatory email from Florida Sigma Omicron chapter inviting them to attend an info session. These info sessions are mandatory unless a student contacts us, then we are able to provide he or she will the necessary information. For the students who attend the info sessions we give them a brief presentation on the history, ideals, values, and benefits of PTS. After our couple info sessions these students can then enter the next step to their initiation process. The next main task for the students is to complete all their initiation requirements. These events include; attend 1 social event, 1 service event, 1 lab or company tour, our annual polo sale, and our annual kickball game. All of these events are detailed much more below.

The last main event for the initiates is the bi-annual kickball game. This event is mandatory for initiates as we usually do teams of initiates vs. officers. Initiates are usually very enthusiastic about this event as it allows them a fun, relaxing day away from studying. Usually, the event is

toward the end of classes so most people are ready for a break. Once the initiates have attended all the requirements and paid their dues, they are ready to be initiated.

Initiation

At the University of Florida we have "reading days" toward the end of each semester. These are a couple days in the last week of classes where there are no physical classes. This allows students extra time to study for exams. We always hold our initiation during those days. At initiation, members, officers, and initiations are expected to dress business professional. The initiates are sat down and given a presentation on some of the important aspects of Pi Tau Sigma. These aspects include; criteria for their membership, ASME Code of Ethics, PTS ideals, and the details about the keys and emblems of PTS. Once the presentation concludes each new initiate is congratulated by each officer with the official PTS handshake. Food is provided to all attending initiation and then the officers for the next semester are elected.

On average Florida Sigma Omicron chapter averages about 9 initiates each semester. For the Fall 2019 semester we had 10, and for Spring 2019 we had 5. About 25% of the new initiates chose to run for officer positions. Florida Sigma Omicron values initiates running for officer positions as this gives new insight into the officer board along with keeping those initiates involved in the organization.

The initiates classes for Fall 2019 and the Spring 2020 virtual initiation can be found in Image 1 and Image 2.

Image 1. Initiate class (seated at table) for Fall 2019.

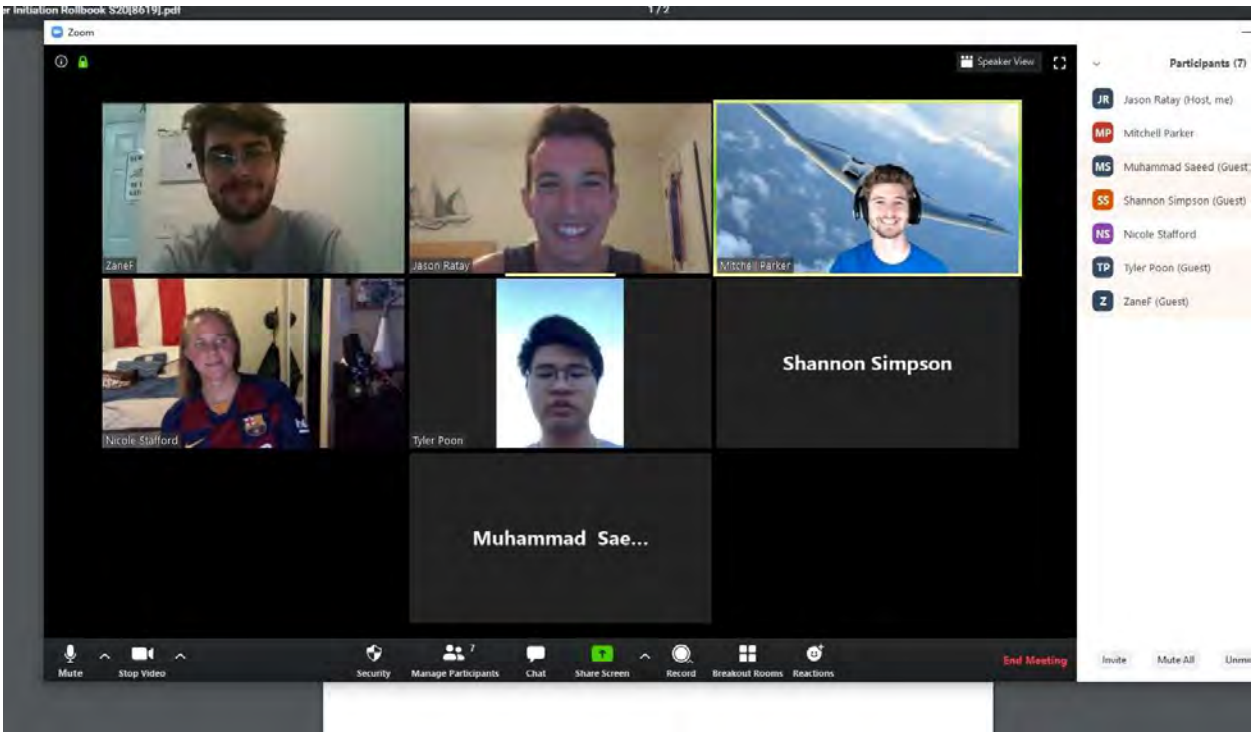

Image 2. Initiate class for Spring 2020.

B. Chapter Activities

Service Events

Each semester we have 2-3 service events to help keep Florida Sigma Omicron an active member of the community. This semester we worked with the Alachua County Humane Society and another University of Florida student group, Tau Beta Pi. In conjunction with Tau Beta Pi, Florida Sigma Omicron organized an event called GatorTrax. This was an event held in the Fall 2019 semester that was a design competition geared towards elementary and middle school aged students to get younger kids interested in the STEM field. Two of our officers, Derrick Benson and Mitchell Parker, gave a brief presentation at the beginning of the event about the concepts of potential and kinetic energy while also sparking creative conversations with the kids to get them to think about all the things that engineers can do. Then using the principles they learned from the presentation, the kids were broken up into groups to make rollercoasters out of pipe insulation and marbles. Each group had a Florida Sigma Omicron advisor to help them along. This was a great event that helped inspire a younger generation to pursue an interest in STEM. Image 3 shows all the smiling faces from the GatorTrax event. The second service event was held at the humane society and allowed volunteers the opportunity to work with humane society staff to care for the animals in the shelter. Our chapter has worked with the humane society in the past, and it has always been a great service event for us. The humane society is always looking for volunteers, and

working with animals is usually a highlight of the initiation process. Overall, the service events from this semester were a great way for members to connect and donate their time in a meaningful way.

Image 3. Participants and officers who attended the GatorTrax event.

Socials

Each semester is filled with 5-6 socials for the initiates and active members to attend and meet one another. After the first info session, we had our first social opportunity at Yogurtology. Initiates and officers enjoyed self-serve frozen yogurt while getting to know one another for the first time. The next social was held at the Reitz Union Bowling Alley and Game Room. Attendees had fun in a round of bowling and playing several rounds of billiards. The 3rd social was held at Sweetberries. Initiates enjoyed a cup of frozen custard of their choosing. We got to know one another and discussed our plans for Spring Break. Some plans included staying in Gainesville, writing a Mechanics of Materials lab report, while others traveled to Europe. The 4th social was held at Plaza of the Americas as members met up for some all-you-can-eat Krishna Lunch. Initiates ate while discussing their upcoming projects and exams. What a great way to take a break from studying! The last social was a Sigma Omicron tradition of all-you-can-eat wings at Gator's Dockside (as seen in Image 4). Everyone had a great time trying out the new flavors and challenging each other to eat spicy wings.

Image 4. Members enjoy all-you-can-eat wings night at Gator's Dockside.

Intro To Engineering

During the semester, one of Florida Sigma Omicron's responsibilities to the Department of Mechanical and Aerospace Engineering at the University of Florida is to assist in teaching the Introduction to Engineering class. It is a freshman level class in which students who may be unsure of which engineering major they want to pursue are taken to the different departments. Each week they are given a tour of the facilities, and told about the different aspects of each department and major including research opportunities, student involvement, and coursework. For the Mechanical and Aerospace section, we work with a member of the department faculty to inform the students on what our department has to offer. The faculty member will go over things such as department enrollment statistics, research opportunities and coursework that students in the department can expect to encounter. We, the Pi Tau Sigma officers, then go over student involvement, including the professional societies, student design teams, and, of course, Pi Tau Sigma. Following the presentation portion of the class, we lead the students across campus to the Rapid Prototyping lab,

which houses some of the 3-D printers available to Mechanical and Aerospace students. Following this, we lead them to a nearby facility known as the Design and Manufacturing Lab. Here, there are mills, lathes, CNC machines, and other manufacturing equipment that is used to teach the Design and Manufacturing Laboratory class. Throughout the time the students are with us, we also are able to go over other aspects of student life in the MAE department as well as answer any questions the students may have. We believe that teaching this class is an excellent way for us to share our passion for mechanical engineering and help share what we know about the profession that we hope to one day be a part of.

Research Symposium

Each spring semester, Florida Sigma Omicron organizes a research symposium for mechanical and aerospace students to showcase their research projects. Last year was the first time that we worked with the Graduate Student Council of the MAE department so we were able to have both undergraduate and graduate students present their research. This event is held every spring around the beginning, so unfortunately due to COVID-19, we weren't able to have this symposium this year. However, in the future we will have a framework to be prepared to hold this symposium in a virtual format.

Polo Sale

Once a semester, we hold a polo sale to offer our fellow mechanical engineers a special mechanical department polo to wear for any business casual occasion. Initiates are required to spend at least an hour helping out this sale. Last year, we were able to secure a spot right in front of our student union at the University of Florida. We sold polos at this location again this year and for the third year in a row we had a new record in terms of polos sold. This shows that Florida Sigma Omicron is helping expand the mechanical and aerospace engineering brand across the University of Florida campus.

Lab/Company Tours

The Florida Sigma Omicron chapter tries to tour multiple companies or labs each semester. In fact, it is a requirement that the initiates each semester attend either one lab tour or company tour. In the Spring 2020 semester we planned to tour a Gainesville based, UF alumni, startup. This company is called Myolyn and they have always welcomed Florida Sigma Omicron and been happy to give our initiates tours of their facility. Myolyn builds a stationary bike - similar to the ones in a gym -- however, their bike is much different than others. Their bike uses strategically placed electrodes and perfectly timed electric pulses to help paralyzed people actually pedal the bike. Florida Sigma Omicron values company tours in the Gainesville areas as we hope to build bonds between our members and current engineering companies in Gainesville. This is one of the opportunities we love to offer out initiates and members; however, the tour this year had to be cancelled due to COVID-19.

Initiates have the choice to satisfy their tour requirement by attending either a lab tour or a company tour. We usually plan 2-3 lab tours each semester and 1-2 company tours. This past year

(Fall 2019) we toured our faculty advisors lab. Dr. Hitomi Greenslet and her students working in the Non-Traditional Manufacturing Lab are working on new, innovative ways to polish a wide range of materials. Most of their lab work focuses on the final step in the manufacturing process, surface finish and/or polishing. On this tour we saw Dr. Greenslet's students using robots and other machines to polish complex surfaces and even the inside of biopsy needles. We also saw the ways they polish glass and lenses used in optics and lasers. Overall, the lab tour was very successful and even one of our initiates started researching with Dr. Greenslet.

Kickball Game

Initiates are required to participate in a kickball game between the current Pi Tau Sigma officer board and the initiates towards the end of the semester. Typically, attendance of this kickball game is mandatory for the initiates and acts as their final requirement before they can be initiated. However, if an initiate has another responsibility in place that keeps them from being able to attend the kickball game, the officers give them an option to give a brief presentation to the officer board about something they are passionate about to make up for this requirement. For example, one of the initiates who wasn't able to attend the kickball game gave a 10-minute presentation about her research that she participates in through the University of Florida.

In Fall 2019, everybody who was able to attend the kickball game had a great time. Since it was towards the end of the semester, it was a great study break for both the initiates and the officers and was a fun way to take our minds off of school for a couple hours. We also brought a frisbee and a football to throw around for people who preferred that over kickball. The officers also provided pizza to the initiates after the game was over, and we all had a fun time getting to know each other even better. Overall, the kickball game was a success and both the officers and initiates were happy that we included this as a requirement for initiation. Again, since this kickball game is always held at the end of each semester, we weren't able to have it due to COVID-19. Since social distancing began to be encouraged in early March, most initiates hadn't fulfilled several of the initiation requirements. To make up for this, we used the method discussed above in that initiates were asked to give virtual presentations about something they were passionate about to the Florida Sigma Omicron officers via Zoom. This still allowed us to get to know each other better and was a reasonable accommodation to these unprecedented times.