2017-2018
Purdue Beta

A. Initiations

Purdue Beta initiated 18 new Pi Tau Sigma members during the fall semester on December 7th, 2017. In the spring, 19 new members were initiated at the initiation ceremony on April 26th, 2018. The road through pledging and initiation has remained an enjoyable and challenging process for new Pi Tau Sigma - Purdue Beta members. The selection process begins the first week of the semester when qualified mechanical engineering students are invited to attend the call out. Qualified students have met or exceeded the minimum grade point average requirement as defined by the top 25th percentile of grade point averages of students with common semester classifications. Of the large number of qualified students, around 10% attend the call out and around 5% continue on with the semester long initiation process. New members must complete a number of activities before they are eligible to be fully initiated. These requirements include

- *Attend Weekly Pledge Meetings:* In the weekly meetings, new initiates get to know one another through icebreakers and group activities including writing trivia questions for the end of semester mechanical engineering social (see part B, Chapter Activities). These meetings are also used to teach the values and symbols of Pi Tau Sigma such as the meaning of the symbols and colors on the key and crest. Additionally, active members are required to attend at least one of these meetings to introduce themselves to the new members.

- *Collect Signatures:* Initiates are required to collect the signatures of chapter officers and chairmen, professors and fellow initiates. This is an opportunity for new members to interact with active members and welcome them to the organization. Some active members have requirements that the initiates must meet before the active member will give their signature such as show two new people the Pi Tau Sigma office and lounge or attend a social event. In the event that an initiate does not complete their signature sheet, they are required to write one Haiku for every signature they missed.

- *Interview Chapter Leaders:* The new initiates are required to interview five club members with leadership positions. They are encouraged to interview members with positions that they may be interested in filling in the future, such that the initiate can gain an understanding of the activities and responsibilities of the position. This is also a way to encourage more in depth interaction between active members and new members.

- *Community Service:* All members (initiates and active) are required to complete at least one hour of service each semester. All members of the initiate class participate in one activity together to promote bonding and relationships. This

year initiate classes participated in winterization and springification where Purdue students are dispatched to local neighborhoods to help elderly residents with yard work just before winter or for spring cleaning.

- *Attend An Actives Meeting:* Each initiate must attend at least one active member meeting to be eligible to participate in initiation. This is another opportunity for new members to meet active members and for new members to collect signatures.

- *Fill Pledge Class Leadership Positions (Optional):* There are three positions within the pledge class that must be filled by new members. These positions are treasurer, service chair, test files chair, and social chair. The treasurer of the class is responsible for collecting dues, the service chair is responsible for organizing a service event for all new members to attend, and the test files chair is responsible for collecting excellent completed exams to add to our library of exams for sale as study aids. These positions are intended to mimic the corresponding active chair positions and help identify members who may be interested in leadership in the future.

- *One Time Membership Fee:* The one time new member fee covers the cost of the nationals membership fee and contributes to the general club funds used to put on various activities for members, mechanical engineering students, and local community members (see part B, Chapter Activities)

- *Pledge Exam:* The pledge exam is a light hearted way to test the initiates' knowledge of national Pi Tau Sigma symbols and leadership, and local chapter practices. The exam lasts one hour and initiates must complete the exam while active members provide distractions such as music, asking initiates to hold umbrellas while taking the exam, and asking initiates to all sit around one very small desk. The exams are graded as pass/fail based purely on the initiates attitude.

- *Initiation:* Initiation must be attended by all new members if they are to become full active members. Initiates first must complete a trust walk (eyes closed, holding hands) around the mechanical engineering building led by the vice president of pledges. The new members then do a few team building type activities such as alphabetizing themselves by middle name without speaking or naming all 50 states in order alphabetically. Finally, new members are called into the initiation room one by one and asked a question by the Purdue Beta Officers ranging from the simple (what is the flower of Pi Tau Sigma) to the ridiculous (estimate the airspeed of an unladen swallow) if the new member's answer is satisfactory to the officers, they are allowed to enter the initiation ceremony. If not, they are sent out and asked another question a few minutes later. Once all initiates have made it to the initiation ceremony, the officers read the nationals-provided initiation script about the ideals of Pi Tau Sigma. The new members are taught the handshake of Pi Tau Sigma, then write their names and

email addresses in the initiation book. Afterwords, the newly initiated members are invited to attend the end of semester banquet where they are recognized for their hard work during the last semester.

Upon fulfilling all of these requirements, the initiates officially become active members of Pi Tau Sigma.

B. Chapter Activities

Purdue Beta is extensively involved in the Purdue mechanical engineering department and the local West Lafayette community. Each chapter activity is briefly described below categorized as a chapter, mechanical engineering, or community event.

Purdue Beta Chapter Events

- *Actives Meetings:* Biweekly active member meetings are held to ensure that all members are up to date on upcoming activities and events. The meetings also offer an opportunity for our members to get to know one another. Attendance is taken at these meetings. Three unexcused absences by a member could result in a member becoming inactive with the chapter.

- *Industry Information Sessions*: The chapter hosted a few special speakers at our actives meetings during the fall and spring semesters, timed with the two major recruiting events at Purdue. These speakers included company representatives from Kimberly Clark, Ford, Caterpillar and Ingersoll Rand looking specifically to recruit Pi Tau members. The company supplies refreshments and promotional items in many cases further encouraging member participation. The presence of these speakers has been part of an effort to increase the benefits of being a Pi Tau member at Purdue. Ultimately the chapter would like to serve as an intermediary, connecting the highest achieving mechanical engineers at Purdue with the most highly sought after positions in industry.

- *Intramural Teams*: Three intramural teams were created from active members this year including coed sand volleyball, coed indoor volleyball, and men's indoor soccer. This activity proved to be valuable to the organization, strengthening relationships among those participating and helping to get members more involved in the group. The teams proved to be overall pretty mediocre and did not make it far in the postseason tournament.

- *Pi Tau Sigma Social Events*: To maintain camaraderie within the chapter, social events are held on a roughly biweekly basis. This year, movie nights held at the president's house were a big hit. Other events such as bowling nights were also organized. The pledges are invited to these events in an effort to make them feel welcome and at home with the chapter.

- *End of Semester Banquet*: At the end of every semester the chapter holds a banquet for all members to celebrate the end of a semester, and to recognize the newly initiated members and the graduating seniors. The chapter caters food from a local dining favorite. This is perhaps the biggest chapter event held all semester and is a great opportunity to take a break from studying for finals and socialize with other members. This is also the event where the next generation of officers is elected in an effort to smooth transitions between semesters. Attendance tends to be around 50 people.

<u>Mechanical Engineering Department Events</u>

- *PTS Tutors*: A unique opportunity that is offered to active members of the Purdue chapter is to tutor students in the ME student body. The tutoring chair was tasked with creating a list of available tutors and their subjects from PTS actives members and members of Omega (the graduate honor society). The tutoring chair managed requests and matched students with active member tutors. Active members are selected to tutor students based upon their performance in the respective classes. Throughout the past semester the number of tutors within the organization has been around twenty students with many of those tutoring in multiple classes. This tutoring program has been successful enough that requests are even received during the summer months.

- *PTS Sponsored Review Sessions*: The chapter sponsors review sessions for introductory mechanical engineering classes such as thermodynamics, statics, and dynamics. Many of the chapter's members are teaching assistants or graders for these classes and thus are well qualified to hold these review sessions. The materials covered in these sessions are past exams that our members completed when they themselves took these same classes in past semesters. The review sessions have been very successful as a form of increasing positive awareness of our organization. We tend to hold one session for each of the three mid-term exams in each of these classes, which can get attendance upwards of 60 students. The test reviewed is made available to any student who would like to have an additional copy for practice.

- *ME Forum*: This is arguably one of the most beneficial events that this chapter organizes when it comes to improving the ME community. This event traditionally occurs during the final academic weeks of every semester and consists of an open forum between students and faculty with discussion mediated by the PTS president and recorded by the secretary. Talking points are gathered from school wide polls asking about students' experiences in their classes and any suggestions they have to make things better. For students, the forum is an opportunity to have their question and concerns addressed by the faculty and staff in charge. This event is beneficial for the faculty because it allows them to

understand what changes students would like to see in the curriculum or department as a whole. The secretary's notes are distributed to the entire ME community after the forum so those not in attendance can familiarize themselves with relevant issues. Examples of issues raised during this year's forum include grading schemes weighting homework, culture in the student machine shop, and access to online resources from class (lectures, past exams). Faculty members present include the department head, the head of undergrad studies, course coordinators,professors, and other ME staff. The chapter provides refreshments to encourage attendance.

- *Mechanical Engineering Social*: The ME social is a semesterly event occurring during the final week of every semester. The event allows students a break from studying and an opportunity to unwind and socialize with fellow ME's and faculty members. PTS members invite as many professors as possible to this event. This event takes place at a local restaurant and the chapter provides food to those in attendance. Additionally, commemorative pint glasses are distributed to the first hundred students/faculty in attendance. A pub style trivia game is the main event while at the bar, with questions being generated by the semester's pledge class with the help of the social chair. This event is traditionally one of the largest the chapter organizes, with attendance between 50 and 100 people.

- *Lounge Sales*: One way in which the chapter is able to provide a service to the ME community is by sponsoring and organizing a lounge in the mechanical engineering building. Active members and pledges sell snacks and refreshments purchased with the chapter's funds at reasonable costs to the mechanical engineering student body, faculty, and staff. The act of manning lounge hours is critical in the pledge process and remaining an active member of the chapter. The lounge is the responsibility of the Lounge Chair who in turn reports to the Vice President of Sales. Our goal with this endeavor is to provide a service more than aiming for profits, so we sell all items at the lowest prices we can offer without taking losses. The lounge is continually improved by adding new snacks to the menu and removing the rarely purchased items.

- *Test File Sales*: In the past another cornerstone operation has been the chapter test sales office. Our active members are tasked with contributing to a test bank of core course exams and quizzes that active members have taken and received a 90% or above on and corrected their mistakes. Historically this has been an excellent resource for mechanical engineering students and a source of income for the chapter, however with the internet making everything more accessible, sales have significantly dropped during the last few semesters. The test files chair who used to be responsible for ensuring exams were in stock began the process of digitizing all of the exams in the test files bank last year. The goal is to in the future sell access to all digitized exams for a one time reasonable price to hopefully compete with the free resources that can be found online.

- *Research Creativity Seminar:* The chapter held a daylong event with an ME research professor to stimulate students to think creatively within the context of research. This event was open first come first serve to anywhere between 20 to 25 engineering students. In the past this was an event for only mechanical engineers, however with the buy-in of the dean of engineering we were able to expand the seminar to include electrical engineers as well. The main activity for the daylong event was developing innovative solutions for delivering clean drinking water to inaccessible areas during droughts. The goal of this event is to inspire creativity and emphasize the notion that in many real world engineering problems there are many "correct" solutions and to arrive at the best solution nontraditional thought processes may be required. This event has been gaining traction with the school of engineering as a whole and is projected to be larger in the future.

- *Compilation of Senior Composite Photo*: A small but critical service that our chapter provides for the ME community is the compilation of the senior composite photo. Every semester a Pi Tau member, the composite chair, works with various staff members to organize a timetable for graduating seniors to have their photos taken. These photos are then sent to the composite chair where they are postprocessed and imported into the final composite template.

- *Solberg Teaching Award*: One of the activities the chapter conducts on an annual basis is the polling of the student body to reward special members of the faculty with a teaching award. Pi Tau members are responsible for conducting the balloting in each upper level ME course and gathering results. The responsibility of organizing this activity traditionally falls on the VP of Actives. Only upper level mechanical engineers are polled to ensure that faculty teaching at all levels in the curriculum are considered. This occurs once a year and would not happen without the chapters help.

<u>Community Events</u>

- *BoilerBlast:* This is a semesterly that is always looking for volunteers and an opportunity for pledging and active members to truly make a difference. BoilerBlast takes place in the late fall and spring of each year and dispatches organizations to volunteer in the community, fulfilling the requests of local residents for a variety of domestic tasks such as moving, cleaning, yard work, etc. This event occurs on one weekend day late in the semester with jobs varying in length from three to nearly six hours. This is traditionally the service event that all pledges participate in.

- *Boys and Girls Club Carnival*: A long-standing tradition within the Purdue chapter, the Carnival sponsored by PTS at the Lafayette Boys and Girls Club is perhaps one of the most popular service events for both chapter members and the children at the club. The event is solely sponsored and organized by the chapter, featuring a bounce house, inflatable obstacle course (always a big hit), a number

of small carnival games and basketball. Every volunteer runs one of the stations or games and distributes tickets to the children who can then redeem the tickets for prizes and candy.

- *Elementary Outreach*: Two service events were held at elementary schools during the last academic year. The goal of these events was to collaborate with a local teacher and give the kids a hands on experience with science and engineering. The elementary outreach chair was responsible for contacting local elementary school teachers, organizing the activity, and purchasing the necessary materials to orchestrate the event. This year the events were creating popsicle catapults and a rudimentary speaker using paper plates. This event typically consists of between five and seven active members going to the school to introduce students to some fun projects that can inspire the students to find enjoyment in STEM fields.

C. Other

Chapter Information

	Fall 2017	*Spring 2018*	*Fall 2018*
President	Margaret Graham	Margaret Graham	Kaan Ardic
Treasurer	Conner Lawrence	Leo Kullman	Leo Kullman
VP Actives	Jack Kurfman	Kaan Ardic	Sam Meyers
VP Pledges	Karina Bjorklund	Yash Vedanaparti	Jamie Macklem
VP IR	Joseph Chamberlain	Joseph Chamberlain	Joe Chamberlin
VP Sales	Will Senior	Monica Caito	Jerry Wang
Secretary	Kann Ardic	Maia Wehling	Romir Agarwal

Chapter Advisor: Dr. Stephen Wereley

Contact Information
Chapter website: http://www.purdue.edu/pts