PI TAU SIGMA ANNUAL CHAPTER REPORT
2012-2013
Purdue Beta

Initiations

Undergraduates entering their fourth semester at the university, or second semester within the school of mechanical engineering with a GPA of 3.6 or greater are invited to undergo the chapter pledge process. This GPA requirement is decreased by one tenth of a point for every additional semester the potential member has been in the school of mechanical engineering. A minimum GPA of 3.3 is required for eligibility to enter the pledge process for students with senior standings.

The pledge process begins with invitations being sent to those eligible students to attend the pledge callout, which traditionally occurs within the first month of every semester. The Vice President of Pledges presents to those eligible the perks of membership, requirements for membership, the necessities for completion of the pledge process, and briefly describes the basics of the Purdue Beta chapter. Near the conclusion of the callout the current executive board is introduced and the floor is opened for any questions potential pledges may have concerning the organization. At the conclusion of the callout attendance is taken of those interested in undergoing the pledge process.

Once those interested in joining the organization have been identified they are required to attend biweekly pledge meetings held throughout the semester. The objectives of these meetings include pledge bonding, education regarding Pi Tau Sigma, and identification of pledge responsibilities. These responsibilities include, but are not limited to, organization of a pledge service event, establishment of leadership roles within the pledge class, aid in operation of a chapter-run lounge, donation of acceptable tests to a test bank, and familiarization with the chapter officers, chair, and active members. The pledge leadership roles include positions of President, Treasurer, Test Files Chair, Service Chair, and Secretary. These positions are intended to mimic the corresponding active positions in the organization and aid in identifying involved individuals.

One of these developmental positions in particular is viewed as a recruitment tool for leadership within the active division of the chapter, this being the pledge service chair. Traditionally this position allows a pledge to organize and direct the pledge service project with the help of the VP Pledges and other active members. During both the Fall 2012 and Spring 2013 semesters this pledge has organized a PTS sponsored after school carnival at the local Boys and Girls Club. This event is explained in more detail below. However, during the Spring 2013 Semester is was decided that pledges should have access to active service events as well as the carnival, so many of the service events throughout the semester were attended both pledging and active members. The intention of this initiative was to induce interaction between pledges and active members, with the ultimate goal of building both social and professional relationships.

Prior to pledge initiation, pledges are required to interview at least five officers or chairs and complete signature sheets that include every officer, chair, pledge, and a defined number of active members and professors. The pledge process culminates in a pledge exam, testing the potential members in areas such as Pi Tau Sigma facts, both on

the national and chapter levels, general engineering knowledge, and familiarization with the name sheets. These exams are then graded by the VP pledges who presents to the executive board a list of those members he or she has seen fit to join the organization based upon test performance and attendance based criteria.

Those pledges that have proven their dedication to the organization by performing at a high level in all criteria for active membership are initiated into the organization during the final week of the academic year. Initiation takes place in front of the entire executive board who describe the basic principles of Pi Tau Sigma to the newly inducted pledge class. It is at this point in time that the pledge class signs their names into the chapter membership log book and pledges make the transition to active members. The initiation is concluded and all active members are assembled at an end of year banquet to discuss the semester's activities and select officers for the upcoming semester.

Fall 2012 Pledges (13 total) ***Activated December 5th, 2012***	**Spring 2013 Pledges (18 total)** ***Activated April 23rd, 2013***

Chapter Activities

ME Golf Outing Spring 2013: The ME Golf Outing provides the opportunity for ME undergrads, faculty, and industry representatives to interact, network, and enjoy a day on one of the local golf courses in the greater Lafayette community. Unfortunately this year no industry reps were present, although BP did express interest in sponsoring this event in the future. This event typically happens once a year pending weather and other conflicting events. Due to weather conflicts in the fall semester, the outing occurred in the spring. Attendance was approximately 25, making up approximately 6 teams. A small fee is charged per person so as to recoup any costs incurred by the chapter.

ME Indoor Picnic BP: The ME Picnic was held indoors in the fall semester due to poor weather but proved to be a very popular event. The cornerstone of this event was the presence of an industry representative and Purdue PTS alumnus from BP. BP provided information on employment and a catered lunch for the event. Although historically the event has been sponsored by multiple organizations within ME, this year PTS took on sole sponsorship. Throughout the day, at least two representatives from PTS helped the BP rep in distributing recruitment material and serving lunch. Attendance varied throughout the day but usually ranged between about 30 and 40 students, with a peek of about 60 near lunchtime.

GE Day in the Lounge: Similar to the BP ME Picnic, the GE Day in the Lounge was an industry-sponsored event with an emphasis on recruitment cosponsored and organized by the chapter. This event consisted of two representatives from GE, one of whom who is the lead recruiter at Purdue, providing funding and supplies for the days activities. The

representatives offered advice on successful interviewing, creating attractive resumes, and general advice valuable to any ME undergrad. This event provided complimentary coffee and donuts to students within the ME community at Purdue. Between two and three PTS members volunteered throughout the morning to aid in donut distribution and keeping the coffee pots full.

ME Social: The ME social is traditionally a biannual event, occurring during the final week of every semester. However in the fall semester an additional mid-semester social was organized due to the events popularity. The event allows students a break from studying and an opportunity to unwind and socialize with fellow ME's and faculty members. This event takes place at a local bar and the chapter provides food to those in attendance. Additionally commemorative pint glasses are distributed to the first hundred in attendance. PTS members invite as many professors as possible to this event, with attendance this year being between three and five in the fall and spring semesters. A faculty versus student trivia game is the main event while at the bar, with questions being generated either by the pledge class or the Social Chair. This event is traditionally one of the largest the chapter organizes, with attendance between 150 and 200 people during the dead week socials. The mid-semester social had lower attendance and thus has been discontinued in upcoming semesters.

ME Forum: This is arguably one of the most beneficial events that this chapter organizes when it comes to improving the greater ME community. This event traditionally occurs during the final academic week 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. For students, it is an opportunity to have a large number of faculty on hand who can collectively address their questions or concerns. This event is beneficial for the faculty because it allows them to understand what students would like changed. The secretary's notes are distributed to the entire ME community at the conclusion of the forum so those not in attendance can familiarize themselves with relevant issues. Talking points are gathered by implementing school wide polls in the week prior to the event. Examples of issues raised in the past include but are not limited to course sequencing and organization of the ME plan of study, class scheduling, academic honesty policies, facility access, implementation of online classes, out of classroom educational resources (use of blogs, lectures uploaded to the internet, and chat rooms for virtual TA office hours), and many more. Faculty members present include the department head, the head of all the computer labs, the head of undergrad studies within course coordinators, any additional professors, and ME facilities employees are always appreciated. The chapter provides refreshments to encourage attendance.

Design Creativity Seminar Fall 2012: The chapter holds a daylong event at an off campus retreat center in the fall of every year with Schlumberger called the Design Creativity Seminar. This event is open first come first serve to anywhere between 20 to 25 mechanical engineering students. This is a very unique event in which a professor emeritus within the school of mechanical engineering returns with any number of Schlumberger representatives, historically between three and five. The main activity for the daylong event is a design project. The goal of this project is to attempt to inspire creativity and emphasize the notion that in many real world engineering problems there are usually many "correct" solutions and to arrive at the best solution nontraditional thought processes may be required.

Schlumberger will cover all costs incurred such as reserving the retreat center, meals for breakfast, lunch, and dinner, and the purchase of creativity related supplies.

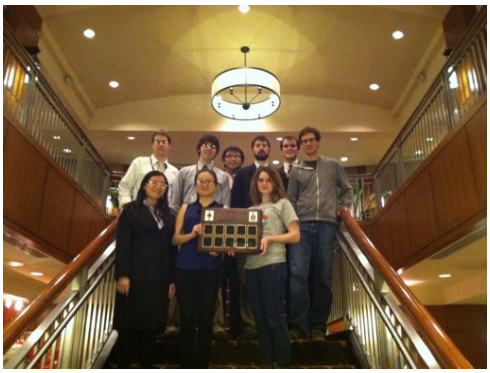
Elementary Outreach Spring 2013: This spring the chapter put forth a significant amount of effort to revitalize a cornerstone service event, the Elementary Outreach. Two active members volunteered as Elementary Outreach Chairs, in charge of contacting local elementary school teachers at Happy Hollow Elementary and purchasing the necessary materials to orchestrate the event. This event consisted of between five and seven active members going to the school and building paper plate speakers with the students. The necessary materials for the project consisted of Styrofoam plates, magnet wire, magnets, glue, and paper. This project introduces students to the fundamentals of electricity, magnetism, and sound to the students. Due to the success and popularity of this event with all involved (students, teachers, and active members) the chapter conducted this service event three times throughout the spring semester. Two different classes were instructed during each visit.

PTS Tutors: Another unique opportunity that is offered to active members of the Purdue chapter is to tutor struggling students in the ME student body. A Tutoring Chair is tasked with managing requests submitted through the chapter website and matching students with active member tutors. Active members are selected to tutor students based upon their performance in the respective classes and areas in which they show an interest. Throughout the past semester the number of tutors within the organization has been around twenty students with many of those tutoring in multiple classes.

PTS Sponsored Review Sessions: Beginning in the fall of 2012, the chapter began sponsoring review sessions for introductory mechanical engineering classes such as

thermodynamics, statics and dynamics open to all students enrolled in these classes, and in general the ME community. 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. They review sessions been very successful as a form of increasing awareness of our organization, its presence in the ME community, and providing a pro bono service for younger students

Industry Information Sessions: During the fall semester the chapter hosted a few special speakers at our actives meetings. These speakers were company representatives from Micron Technologies and Honeywell Aerospace looking specifically to recruit Pi Tau members. These events are relatively simple and usually require the chapter to simply reserve a location and publicize the event for the company, which in many cases supplies refreshments and promotional items. The presence of these speakers has been part of an effort to increase the benefits of being a Pi Tau member at Purdue. These information sessions are in addition to the other aforementioned events with BP, GE, and Schlumberger. 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.



National Convention OSU: In an effort to solidify the chapter's standing at the national level and educate as many non-graduating members in the goings on of the Pi Tau Sigma national organization the largest delegation of active members from Purdue ever attended the PTS National Conference at Ohio State University early in the Spring semester. In order to encourage participation and foster interest in PTS nearly all costs for the trip were covered by the organization, thus this event consumed a large portion of the annual budget. Additionally this large delegation was made possible by the proximity of OSU to Purdue. The active delegation consisted of nine students, of which six were non-graduating. This event has proven to be hugely valuable to the chapter as those non-graduating members in attendance have gained valuable insight into the national organization and been inspired by the activities and events conducted by other chapters. Hopefully, the success of this past years trip to OSU will set an example for future Purdue delegations.

Compilation of Senior Composite: 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 post-processed and

imported into the final composite template. In the fall semester of this past academic year this process was streamlined with the creation of a program for automatically cropping images and importing them into the composite thanks to a computer savvy active member.

Resume Book: The fall of 2013 semester was also the first time the chapter has created a resume book. Of the active members about 60% chose to submit their resumes to be publicized in this document. Once submitted about half of those in the book received interest from industry. Interest is defined as an effort to reach out to our members via email or phone on the part of interested companies. In the spring semester another edition of the resume book was created including new active members and updated resumes. In the future this resume book may be touted as another valuable incentive to encourage participation within the chapter.

Establishment of Annual Alumni Newsletter: The spring of 2013 marked the first installment of the Purdue Beta Pi Tau Sigma Alumni Newsletter. The purpose of this publication is simply to update alumni on the goings on of the chapter, what the students are doing, where they are going, and hopefully encourage interaction and communication between current members and alumni. The reaction to this publication, distributed using an email mailing list was greater than expected, with many alumni replying to simply check in with current officers and chairs that they had once held. Additionally the organization benefits as this newsletter acts as a fundraising venture. This year the proceeds were dedicated to the restoration of the chapters bent, and resetting it on the main engineering mall where it belongs. This had been an ongoing project for the past decade and was accomplished at the closure of the spring semester.

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. With the completion of a new wing of the ME building the chapter was given valuable space in a public kitchen area. 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. In the spring semester funds were dedicated to the purchase of a laptop for the lounge that is used to track inventories, sales, time of sales, and relative popularity of items. Knowledge of these parameters allow for the optimization of hours worked and inventory stocked with respect to time throughout the semester. 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.

Test File Sales: In the past another cornerstone operation has been the chapter test sales office. Our active members are tasked with collecting and maintaining a test bank for a number of past exams given in core mechanical engineering courses. The Test Files Chair, who is responsible for ensuring adequate supplies of exams every week of the semester, directs this operation. Like the Lounge Chair this position reports to the Vice

President of Sales. Additionally, similar to the lounge a desktop computer is used for tracking exam sales, contains a calendar of all exams in the ME department, and also contains many key PTS related documents. The exams in the test bank consist of tests that active members have taken and received a 90% or above on and in most cases have edited the completed test, correcting any mistakes. These corrected exams are then photocopied and sold to the ME undergraduate student body for the very reasonable price of $0.75 per exam. In the Fall 2013 semester sales reached an all time high, with this office selling enough exams so that every undergrad in the school of mechanical engineering on average purchased 2.4 exams, this comes to slightly over 3000 exams sold, generating over $2000 in profits for the organization. In the spring semester sales suffered as the test sales office began to compete with a free online test bank, ultimately generating slightly greater than $1000 in profits. Due to this massive decrease in profits the future of this endeavor is uncertain, with the most probable option being the creating of an online test bank that relies on heavy usage to entice online advertisements for revenue generation.

Soldberg 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 Vice President 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.

End of Semester Banquet: At the end of every semester the chapter holds a banquet for both the incoming new members and the outgoing graduating seniors. The chapter either rents a local restaurant or has food catered to an on campus location. This is perhaps the biggest internal events 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. The attendance is normally around fifty people.

Pi Tau Sigma Dodgeball Team: The spring of 2013 semester saw the creation of the first ever Pi Tau Sigma intramural team. Intramural coed dodgeball was initially selected, but due to the lack of interest on behalf of many of our female members the team entered in the Men's Open league. This activity actually proved to be valuable to the organization, strengthening relationships among those participating and helping to get members more involved that may not have necessarily taken that first step on their own. The team was also a surprise as they proved to be unexpectedly good at dodgeball, making it to the semifinals of the league tournament. Hopefully in the future a sport will be selected that will encourage female involvement as well, but considering this was the first attempt at involvement in intramural sports this activity was deemed a success.

Officer, Active, and Pledge Meetings: In addition to the aforementioned events biweekly officer and member meetings are held. Officer meetings are structured to ensure that all activities and events are being completed and that all officers are on task. The President

runs this meeting and sees to it that the organization is running effectively as a whole. The active member meetings are held on off weeks from the officers meeting and the VP of Actives or President runs them. The purpose of these meetings is to convey important information about what is happening when and to gather volunteers for certain events as well as an opportunity for our members to get to know one another. Pledge meetings are held on the same days as the officer meetings and are designed to simulate active membership. These meetings are run by the VP of Pledges who is often joined by the remainder of the executive board at the conclusion of the officers meetings. Typically refreshments are provided for each meeting. This creates more of a social atmosphere and it gets more people to come and be involved. Attendance is taken at these meetings and there are a minimum number of unexcused absences each member has to maintain membership in the chapter.

Ambassadors for the School of Mechanical Engineering: A role that has been restored by the chapter over the past few years is that of a recruiter for the mechanical engineering program. In the fall of 2012 members of our chapter were present during parents day. This event occurs in the fall of every year when the parents of freshman students will come to campus. The college of engineering will set up booths with the intention of recruiting undecided freshman engineers, and their parents, into one of the engineering disciplines. The chapter's presence at this event is critical, as it's members were able to open the eyes of these young engineers and their parents to the potential gained by being a mechanical engineer at Purdue. Additionally active members were able to offer a diverse array of experiences enabling these potential future mechanical engineers to see where they will be in one, two, or three years time. A similar event was conducted in the spring of 2013, during which active members presented past senior design projects to admitted high school seniors.

Service Events

Further motivated by the chapter's success at the National Convention, specifically with respect to the service events it participates in, organizes, and publicizes. During the spring semester of 2013 additional emphasis was placed on these activities. The service events that the chapter contributes to can fall into one of two categories; events solely organized by the chapter and those that the chapter volunteers to participate in but does not necessarily run. As one might expect both of these types of events require different levels of involvement with the chapter. Listed below are the various service events that the chapter has participated in during the 2012-2013 academic year.

BoilerBlast Spring 2013: This event was the primary active service for the spring of 2013 semester. While not organized by the chapter, it is an annual event that is always looking for volunteers and an opportunity for the active members to truly make a difference. BoilerBlast takes place in the spring of every year and is an opportunity for Purdue students and 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. Officers oversee teams of active members to a location and fulfill whatever task the client has requested. This event occurs on one weekend day early in the semester with jobs varying in length from three to nearly eight hours.

Science Fair Judging Wea Ridge Elementary 3rd Graders: Perhaps one of the most popular service events this year was volunteering to be judges in a local elementary school science fair. Active members volunteered time on a weekday morning to travel to a nearby elementary school for a few hours where the third grade class was holding a science fair. The PTS delegates told the students briefly about themselves and mechanical engineering and then listened to a series of presentations by the third grade students. At the conclusion of the presentations finalists were selected and presented to the entire class, with a 1st, 2nd and 3rd place being chosen from the finalists. Students were selected based upon their experimental design, emphasis on the scientific method, and critical thinking skills.

Wabash River Enhancement: This opportunity arose when one of the chapter's officers heard about it in a technical elective and should prove to be a valuable outlet for community service for the organization in the future. Much like BoilerBlast, this event is organizes by the Wabash River Enhancement Organization that holds various environmental projects throughout the local community. The specific project that the chapter helped to complete this semester was planting local flowers and grasses in a no-water outdoor garden at a local children's home. Over a thousand plants were planted in a matter of a few hours and it was truly rewarding to see the transformation in the landscape outside the home between arrival and departure.

Monetary Collection for Lafayette Urban Ministries: Encouraged on by one of Purdue Beta's sister chapters, Illinois Alpha, the chapter organized a can and funds drive late in the spring semester to benefit Lafayette Urban Ministries. The chapter publicized the can drive, incentivizing students to participate by rewarding donations with free test copies. All said, about one hundred dollars were raised to be donated to the shelter. This activity is representative of perhaps future service events at the national level. There is significant potential if these "competitive" service events could be organized among all chapters in the country, with special awards or recognition given to the most successful chapters at nationals. The results of this initial can drive were inconclusive due to different collection methods, so a tie was called between the two chapters.

Boys and Girls Club Carnival: Now a 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 with respect to 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 games, basketball, and an arts and crafts station. Every volunteer runs one of the stations or games and distributes tickets to the children who can then redeem the tickets for prizes. This event has traditionally been the pledge service event but due to its popularity and the initiative the chapter has undergone to increase service activities it has been opened up to both actives and pledges. However most of the planning is still done by the pledge class, and is overseen by the Vice President of Pledges.

PTS Red Cross Blood Drive: This event was primary active service event for the fall of 2012 semester. This event was organized almost entirely by that semester's service chair who worked with an intern from the Red Cross. PTS responsibilities consisted of finding a location for the event to occur, publicizing the Blood Drive via email and flyers, registering donors on the day of the drive, and operating a canteen to provide donors with refreshments during and after the donation process. Active members worked the drive in hour-long shifts with a minimum of two people at the canteen and two at the donor sign in. This event was fairly successful given the number of blood drives that week (three in total with the two others earlier in the week) collecting a total of about 75 units.

5k Color Run: In the spring of 2013 a group of active member expressed interest in participating in a Color Run to be held on campus with proceeds benefitting cancer research. Those participating students, both actives and pledges, paid race fees. Volunteering for this event was counted as a service event.

Other

Officer Information

	Fall 2012	Spring 2013	Fall 2013
President	Nate Bergman	Nate Bergman	Ryan Clark
Treasurer	Dusty Youngs	Aaron Melemed	Wenchang Wang
VP Actives	Allie Graban	Ryan Clark	Laura Chemler
VP Pledges	Matt Brauer	Trey Angus	Andrew Yuill
VP IR	Adam Potrzebowski	Paige Scott	Aaron Melemed
VP Sales	Ryan Clark	Anthony Capone	MingMing Zhang
Secretary	Laurel Peterson	Laura Chemler	Andrew Schumacher

Chapter Advisor
Dr. Steven Wereley

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