Pi Tau Sigma Annual Report

Drexel Xi Chapter

2014-2015 Academic Year

A. Initiations

Selection Process

The selection process for the Drexel Xi chapter of Pi Tau Sigma is dependent upon both the prospective member's academic record as well as their willingness to be involved in university activities. A list of prospective students in the Mechanical Engineering and Mechanics department at Drexel University who have met the academic requirements for the Pre-Junior, Junior and Senior class standing is provided by the Academic Advisor of the department to the President of the Drexel Xi chapter one month prior to the induction ceremony. The list is then screened by the Department Head as well as the Assistant Dean of Student Conduct and Community Standards so as to remove any and all prospective students who have violated the Drexel University Academic Honesty Policy. After the list has been screened, the President of Pi Tau Sigma Drexel Xi contacts each prospective member to invite them to be a part of the honor society. The stipulations set out in the invitation to be inducted into the honor society are: (1) Attend an informational meeting explaining Pi Tau Sigma and (2) Attend at least two events hosted by either Pi Tau Sigma or the Mechanical Engineering and Mechanics Department. These events typically fall under the classification of social, volunteer, or service upon which the prospective students are regularly invited to attend. Should members who have met the rigorous academic requirements, meet the additional informational and involvement requirements for the Drexel Xi chapter, they are then cordially invited to participate in the upcoming induction ceremony and subsequently solidify their role as a member of the organization for life.

Requirements

Each prospective member must meet the requirements set forth by National Pi Tau Sigma via the Constitution, and reinforced by the Drexel Xi Pi Tau Sigma Constitution. These academic requirements for Pi Tau Sigma Drexel Xi chapter are reflected as follows:

- First term Juniors upper 25%, Last term Juniors upper 25%
- First term Seniors upper 33%, Last term Seniors upper 35%

Additionally, the aforementioned information session attendance as well as proof of attendance at at least two events hosted by either the Drexel University Mechanical Engineering Department or by the Pi Tau Sigma Drexel Xi chapter is required of inductees. Above all, each inductee is required to pass an academic honesty screening conducted by the Department Head of Mechanical Engineering and Mechanics as well as Assistant Dean of Student Conduct and Community Activities at Drexel University. This ensures each student inducted into Pi Tau Sigma Drexel Xi follows the Drexel Academic Honesty Policy, maintaining the integrity of the organization.

Ceremony, Rituals, and Celebration

Induction ceremonies were held twice during the 2014-2015 academic year. The first induction ceremony was held during the Fall quarter, Friday, November 21st 2014 from 6-7pm in the Mechanical Engineering and Mechanics Seminar Room with all members of the Pi Tau Sigma Drexel Xi executive board in attendance. The second induction ceremony was held during the Spring quarter, Friday, May 1st 2015 from 6-

7:00pm as well in the Mechanical Engineering and Mechanics Seminar Room with all members of the executive board in attendance. Our rituals uphold the script found in the Pi Tau Sigma National Constitution. Following the rituals of Pi Tau Sigma, a photo of the initiates with the present executive board was taken in the Main Building of Drexel University. After each induction ceremony, initiates were invited to celebrate their achievements with the executive board with a dinner paid for by Pi Tau Sigma Drexel Xi chapter. The majority of initiates attended the celebratory dinner and found it a great time to network and meet new members of the organization. All together 15 students were inducted into the honors society at the Fall 2014 induction. The induction class is pictured below.

Fall 2014 Pi Tau Sigma Drexel Xi Induction Class

The Spring 2015 ceremony accrued 18 new members.

B. Chapter Activities

Leadership and Service

The main goal of the Drexel Xi Chapter of Pi Tau Sigma is to act as the liaison between students and the mechanical engineering department. There are many ways in which we fulfilled this role, but one of the primary ways was through conducting our second annual MEM Student Survey. This survey pooled information from students on the strengths and weaknesses of the department, as well as ideas and suggestions for developing a stronger department and curriculum in the future. Over 170 responses were

recorded, organized, and prepared into a comprehensive report. This report is currently being finalized, and its results will be presented in the Summer Term Faculty Meeting. Past Pi Tau Sigma Annual MEM Student Surveys have been extremely beneficial, with most faculty taking the results into account to modify their teaching methods and practices. Based on our reports from last years the department has committed to buying entirely new equipment for the teaching labs, giving students greater access to machinery for projects, and renovating the student computer center. The department has also reached out to Pi Tau Sigma to help redesign the curriculum for future years. It is Drexel Xi's hope that this year's report will follow the path established by past years reports in providing necessary feedback and constructive criticism to Drexel's MEM Department.

In May 2015 Drexel Xi and ASME headed an undergraduate committee for interviewing candidates for the new Department Head position. Through a rigorous interview system culminating in surveys and reports on each candidate, Drexel Xi was able to recommend its top choices for the open position.

The members of Drexel Xi also serve as representatives at MEM department Open Houses and Accepted Student Days, fielding questions from prospective students and their families about the department and student life. Our students give presentations on their Drexel experiences and sit on panels to address big issues for incoming students and their parents.

Our members also sit on a major faculty committee within the department: the Student Advisory Committee. The Student Advisory Committee handles student issues, student organizations, and departmental social events. Through the Student Advisory Committee, Pi Tau Sigma, along with ASME, collaborated in hosting an array of events, including the MEM Department's holiday party as well as the MEM Department's Senior Sendoff, were prizes were given to the most academically gifted seniors as well as the winning Senior Design Team. The Undergraduate Curriculum Committee, on which Drexel Xi participated last year, was inactive this school year, but with the appointment of Dr. David L Miller as new department head, Drexel Xi will once again participate in this committee once the panel reassembles.

Aside from the committee panels and Open Houses/Accepted Students Days at Drexel, Drexel Xi gives back to the MEM Department by participating in events such as the Fireside Chat, held in the Summer of 2014, were students gathered with faculty and staff of the MEM Department to voice concerns about the current state and future

direction of the department. This allowed students to communicate directly with the department representatives and to understand the current plan that the department has, which was a concern raised during the 2013-2014 MEM Student Survey.

Drexel Xi partnered with the MEM department and the Academic Center for Engineers to connect our students with those struggling in higher-level engineering courses. We have collected a list of volunteers and are matching each new student request for a tutor with an appropriate honors student. This strengthens the academic knowledge of not only the struggling student but the tutor as well.

Finally, Drexel Xi decided that it was time to give back to the professors that had influenced the lives of students for so many years, and as such, established the Teachers Excellence Award, or TEA, for short. This award would honor the best professors in Drexel's MEM Department, as chosen by the students themselves through anonymous department-wide voting. Two winners were chosen, one for graduate students and one for undergraduate students, and they were presented with a certificate to their achievement and commitment to the betterment of Drexel students, as well as a "TEA mug", to commemorate their achievement.

Professional Events

For the 2014-2015 academic year Drexel Xi wanted to be sure to hold a research event, professional event, and a large speaker series. For our research event we reached out to our newest faculty, Dr. Hisham Abdel-Aal. We hosted Dr. Abdel-Aal to present on his life and his research on Bio-tribology, biomimetics, and bio-inspired design.

For our professional event, we reached out to our Vice-President's past co-op/internship supervisor, Allie DeRocco. Mrs. DeRocco works as a Systems Engineer at the Naval Sea Systems Command (NAVSEA) in their ground to air missile systems in their Naval Surface Warfare Center. Mrs. DeRocco hosted a talk where she explained the work performed in NAVSEA, her experience aboard several different US navy vessels across the world, and the hiring opportunities for both internships and full-time positions at NAVSEA in the Philadelphia Navy Yard and across the country. There was a great turnout by students both from Drexel Xi's PTS chapter and from the MEM department itself.

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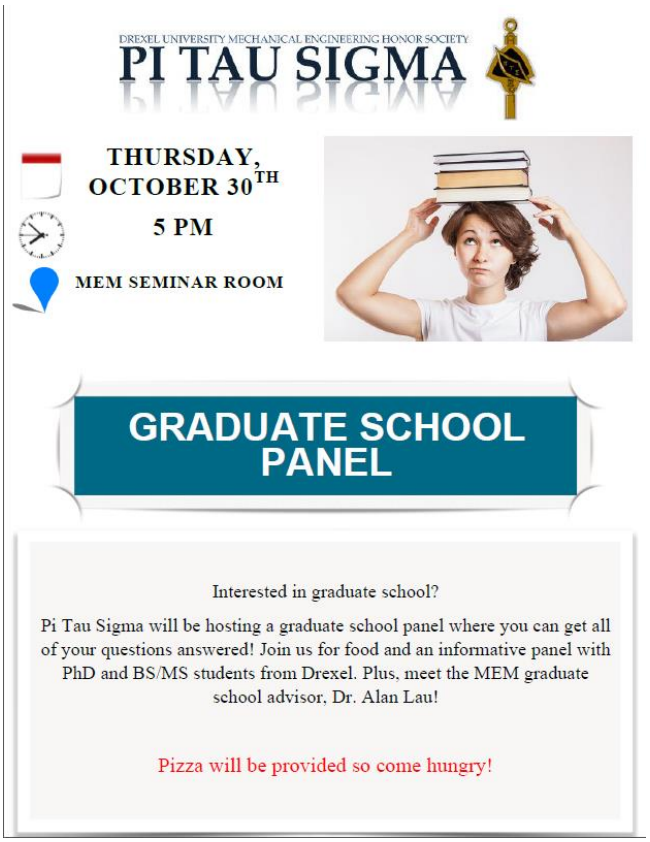
Dr. Abdel-Aal's New Professor Presentation

During the Spring Term, Drexel Xi hosted a catered industry speaker event as our largest speaker event of the year. Charles Fleshman, from Rimkus Consulting Group, Inc., talked about his many experiences in machine design, forensic engineering, and project management. This was an engaging events with vast examples of how an engineer should prepare to work in industry after graduation. This was also a great opportunity for students in search of a job, as there was a recruiter present at the event.

Information Sessions

Our chapter hosted several information sessions throughout the 2014-2015 academic year in order to provide our students with the best and most up-to-date information on the opportunities available to them.

First we organized an event with the Drexel University Fellowship Office. The event was geared towards informing students about nationally and internationally prestigious scholarship programs that help them get the education and experience they need to pursue your professional goals, among them were the Goldwater Scholarship, NSF Graduate Research Fellowships Program (GRFP) and the DAAD Research in Science and Engineering Internships (RISE). Additionally, there were several scholarships outline to which international scholars may apply, so as to encampsule the entirety of Drexel's diverse student body.



Grad School Panel Flier

We also hosted a graduate school information session and dinner, where the Drexel Graduate Advisor walked students through the process of deciding on graduate school and applying. Several graduate students partaked in the event, answering the undergrads various questions, such as what is the best time to apply for grad school, and how easy or hard they found the transition from working in industry to enrolling into grad school. This event drew over 20 people; the students later commented on how useful the event was since there is little support in engineering for those interested in graduate degrees.

Drexel Xi then worked with the Study Abroad office to give a presentation to students on how to fit studying abroad into the hectic engineering curriculum. This provided students with the knowledge of how to take opportunities to become well-rounded global citizens. Both our President and Vice-President helped host this event, as the former interned for 6 months at an Oil company in Colombia for 6 months and the latter studied abroad in Germany for 3 months.

Two years ago Drexel Xi took it upon ourselves to make sure that students understood the advantages to participating in the Fundamentals of Engineering exam. We collected information and presented it to seniors, resulting in a large spike in participation in the FE. Because of this, the College of Engineering reached out to us last year to help develop a presentation and online resources for students interested in the FE. We helped the mechanical engineering and civil engineering departments in divulging information to their students, emphasizing the recent changes made to the exam structure. This year we hosted yet another information session explaning the benefits of undertaking the FE exam, even as a Mechanical Engineer. The talk was a success and it

paved the road for future FE Exam review session amongst the MEM Department at Drexel.

Finally, during a Spring Term board meeting, Senior and Junior board members were discussing the hardships of finding industry jobs post-graduation and how beneficial it would have been to know more about the job search process prior to Senior year. Because of this, a new information session was created in conjunction with the Steingbright Carrer Development Center (SCDC) to inform Juniors and Pre-Juniors of the steps they can take ahead of time to facilitate their job searches and application during their senior year. The event had a good turnout and will likely be repeated in an annual basis to inform upcoming Juniors and Pre-Juniors.

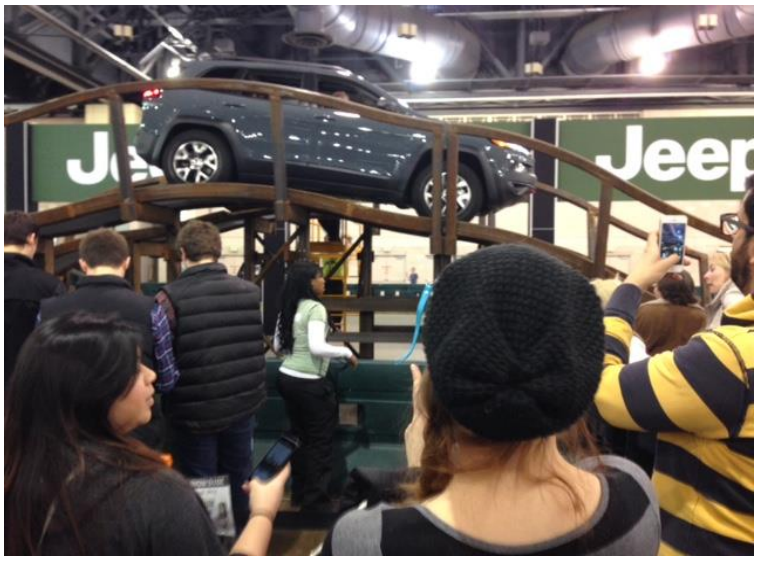
Social Events

In addition to our many professional events throughout the year, we also hosted and participated in several social events for our students. In the fall term we hosted a brewery tour of Yards, as well as a finals week study break.

Yards Brewery Tour

In the winter we hosted a general body meeting with food, Megabad Movie Night at the Academy of Natural Sciences, and another finals week study break. During the winter term, we paired up with Drexel's ASME chapter and attended the Philadelphia Autoshow. Drexel Xi bought the tickets for the show while ASME purchased tokens for transportation to and fro. This event attracted a wide array of Drexel MEM students, who were delighted to experience the Autoshow courtesy of both student organizations.

Megabad Movie Night



Philadelphia Auto Show

Spring term we decided to host an event called “Pizza with Professors” for lunch during several different times throughout the term, where students could meet with their professors in an informal setting. We also participated in the Philadelphia Science Festival Event, specifically the events Nerd Night, a myth-busters type of event, and the Science Carnival, where different science projects were showcased on the notorious Benjamin Franklin Parkway.

We participated in the official MEM Senior Send-Off Party at the end of the year, and we hosted our own informal senior send-off at a local restaurant, for seniors and members alike to relax and reflect on the past year.

To raise funds for the 2015-2016 school year, Drexel Xi hosted a number of fundraisers throughout the year in local restaurants Landmark Americana and Wahoo’s. A total of 3 events were held which raised over $100 combined, allowing for these funds to be used next year.

In the hopes of raising the Drexel Xi members' spirits about the organization, a t-shirt design competition was set in motion. Members could submit their own original Drexel Pi Tau Sigma t-shirt designs and then vote to choose the winning design. 5 designs were submitted and the winning design was chosen by all members. Said design was then used for the new Drexel Xi Pi Tau Sigma shirts. The winner of the design competition, Mohammad Hazraf, received a free t-shirt and a ticket to the Philly Autoshow. Many members have purchased the new Drexel Xi t-shirt, making it now a more renowned name amongst Drexel students. The design can be seen below.

Drexel Xi Pi Tau Sigma T-shirt Design

Chapter Meetings

Throughout each quarter (Fall, Winter, & Spring) of the 2014-2015 academic year, weekly meetings were held for the officers of Pi Tau Sigma. Meetings were typically at around 5:00pm or 6:00pm in order to accommodate the schedules of those at Drexel with class as well as those on co-op. These meetings were one hour long (though occasionally, on busy weeks, they would go over an hour) with a detailed agenda, subsequent action items, and minutes dictated by the Recording Secretary. Additionally, planning meetings were held at the beginning of the term to sketch out a schedule of desired events and involvement of the organization. The planning meetings were generally two hours, and had an open discussion forum, with secretaries recording consensuses and responsibilities. In addition to the regular meetings, there was also the matter of electing the new members of office. Members were elected democratically within the organization and announced on May 27th, 2015.

National Convention

The National Convention Centenary, held at the University of Illinois at Urbana-Champaign on February 26st thru the March 1st was an instrumental step in the progression and alignment of Pi Tau Sigma chapters both nationally and internationally. Through the gracious donations from Drexel's MEM Department's Student Advisory Committee, Drexel SAFAC (Student Affair Fee Allocation Committee), and Pi Tau Sigma National itself, six out of the seven Drexel Xi officers attended the Convention

(Jose Uzcategui, Veronika Legkobitova, Dana Bronen, Mitchel Barrish, Ernest Jordan, Erica Fernandez). The convention was exceedingly busy, with Dr. Kontsos, our past Drexel Xi advisor, stepping up into a leadership role within PTS National. During the convention, all of our officers were actively involved in their respective teams during the design competition. Drexel Xi's President (Jose Uzcategui) and Vice-President (Veronika Legkobitova) were part of the team that won the award for Best Invention, with both members serving as spearheads for the design and acting as the two speakers during the product's presentation.

Drexel Pi Tau Sigma and Dr. Kontsos

C. Other

2014-2015 Academic Year Officers

Elections Announced – May 27th, 2015

President	Veronika Legkobitova
Vice President	Caitlin Bubel
Treasurer	Dana Bronen
Webmaster	Victor Micucci
Corresponding Secretary	Deborah Kapilow
Recording Secretary	Matthew Schlegel
Event Coordinator	Rachael Reich