# PI TAU SIGMA ANNUAL CHAPTER REPORT
# 2011-2012
# California Pi Omega

## A) Initiations

### I) Selection Process

The Berkeley California Pi Omega Chapter invites students to join who are in the top third of the senior class and the top fourth of their junior class in the Mechanical Engineering Department. This is determined by the respective student's grade point average (GPA) and number of completed credits. The official requirement for junior standing is 60 credits and for standing, it is 90 credits. The list of students that meet these requirements is provided by the College of Engineering between the fourth and fifth week and eligible candidates are notified immediately by the External Vice President. The following Wednesday after the notifications, a Candidate Meeting is held to introduce the qualified candidates to Pi Tau Sigma and inform them of the benefit of joining. There were 25 pledges who crossed in Fall 2011 and 10 pledges in Spring 2012.

### II) Pledge Requirements

Similar to the past, the pledges must go through a pledge process that tests their strengths. The pledge process consists of several required meetings, two outreach events, several social events, a challenging pledge project, required submissions, and dues. The requirements of pledgeship are explained during the Candidate Meeting and are included in the candidate packet as shown below:

**Required Events –** *Attend **ALL** events*:

| | | |
|---|---|---|
| ❑2/29 | Pledge Barbeque | [5] |
| ❑3/7 | General Meeting 1 | [5] |
| ❑3/21 | General Meeting 2 | [5] |
| ❑4/11 | General Meeting 3 | [5] |
| ❑4/28 | Initiation | [5] |
| ❑TBD | Big/Little Sibling Event | [1] |

**Outreach –** *Accumulate **10** points*:

| | | |
|---|---|---|
| ❑3/10 | Berkeley Marina Clean-Up | [5] |
| ❑3/17 | E4K | [5] |
| ❑4/7 | Junior Solar Sprint Project | [5] |
| ❑4/13 | Mini University | [5] |
| ❑TBA | Challah For Hunger | [5] |
| ❑TBA | PTS Outreach Day Planning | [5] |

**Social Activities –** *Accumulate **15** points*:

| | | |
|---|---|---|
| ❑3/3 | Karaoke | [5] |
| ❑3/9 | Frisbee w/ ASME | [5] |
| ❑3/13 | Game Night | [5] |
| ❑4/7 | Trampoline Gym w/ TBP | [5] |
| ❑4/12 | Bowling | [5] |
| ❑4/14 | Engineering Sports Night | [5] |
| ❑4/17 | Movie Night | [5] |
| ❑4/22 | Laser Tag | [5] |
| ❑TBA | CTF | [5] |

**Pledge Project –** *7 points*:

| | |
|---|---|
| ❑Submission of concept sketches by GM1 | [1] |
| ❑Private presentation of low fidelity prototype by GM2 | [1] |
| ❑Project presentation and evidence of testing by GM3 | [1] |
| ❑Attendance of a social event with team mentor | [1] |
| ❑Clearing project challenge on initiation day | [3] |

**Student Services – *2 points*:**
❑Perform 2 hours of tutoring services on behalf of PTS or write a question for a PTS review session

**Required Submissions – *2 points*:**
❑Resume [1]
- Email resume to PTS Industrial Liaison in PDF format by ***March 21, 2012***
- Submit format: <Graduation Semester>_<Last Name><First Name>  Ex: sp08_SmithJohn
- Free PDF file converter available at http://www.cutepdf.com

❑Three Electronic Copies of Exams [1]
- Mechanical Engineering curriculum; Preferably with solutions
- Email to pts.exams@gmail.com

## III) Pledge Projects

During the pledge process, the pledges are required to work on a project which challenges their understanding of mechanical engineering concepts, creativity, and engineering skills. After the pledge barbeque, pledges are separated into teams of four and presented with the pledge project and an overview of the rules and requirements. Each team has till initiation to design, build, and test their devices and their progress is monitored by check-ins and a presentation of their project to the Pledge Projects Committee and to the society. The Fall 2011 project consisted of building a sumo-wrestling device that would battle in a one-on-one competition setting by pushing the opposing device past a line. The battles occurred on a multitude of surfaces from carpet to wood in order to test robustness and flexibility of each device. The Spring 2012 project was a racquetball-launching contraption where each launch was judged for air-time and distance traveled.

***PTS Pledges testing out their Sumo-Wrestling Bots***

## IV) Initiation Day

### a) The Pledge Project Tournament

The pledge project tournament is the first event of initiation and is held early in the morning. The members of the Pledge Project Committee serve as judges and award points based on the requirements of the challenge as well as aesthetics, creativity, and craftsmanship. Following the tournament, the team with the highest points is announced as the winner and every member is awarded a trophy for their accomplishment. The winning teams from both Fall 2011 and Spring 2012 are shown below.

*Fall 2011 Winning Pledge Team*

*Spring 2012 Winning Pledge Team*

**b) MATLAB Scavenger Hunt**

Once the pledge competition is over, the pledges move to the main Mechanical Engineering building to begin one of Pi Omega's unique events, the MATLAB Scavenger Hunt. Since its introduction over three years ago, the scavenger hunt has been an exciting event that challenges the pledges both individually and collectively. Each pledge group is given clues with which they must find one of the seven stations located throughout the Mechanical Engineering building. When the group arrives to the referenced locations, they are presented with a computer and have to answer questions on MATLAB regarding Pi Tau Sigma, our school's faculty and history, and Mechanical Engineering concepts. When a question is answered correctly, the pledges are directed to another station. Once each group finishes their last station, they are given the last clue which takes them to the PTS Ceremony Room. The Scavenger Hunt usually lasts about two hours.

**c) Ceremony**

Once the pledges are seated in ceremony room, the Pi Tau Sigma Induction Ceremony begins and the pledges are inducted into Pi Tau Sigma according to the official rituals of the national chapter. After all pledges have crossed, they are taught the Pi Tau Sigma handshake and then shake hands with all active Pi Tau Sigma officers and sign the Pi Omega Roll Book.

The Officer Elections for the next semester is held immediately after the induction ceremony and lasts about two to three hours. New members are encouraged to run for positions in order to keep perspectives fresh in the society. Photos are then taken of the incoming pledge class as well as the outgoing officer corps. After the initiation activities, the officers and new actives meet later in the evening for the End of the Semester Banquet at a local restaurant in Berkeley. Towards the end of the banquet, the Pledge Project Chair gives a formal announcement of the winning pledge team which is then followed by the president announcing the winner of the "Officer of the Semester" Award. This award is given to the officer who has demonstrated strong commitment to the society that goes beyond what was expected of them. A final speech is given by semester's President which is followed by a standing ovation for all

graduating members as they reveal their future plans. The Fall 2011 initiation was held on December 3rd, 2011 while the Spring 2012 initiation was held on April 28th, 2012.

***Spring 2012 End of the Semester Banquet***

## B) Chapter Activities

### I) Industrial Relations

#### a. Mechanical Engineering Career Fair

Fall 2011 was the first semester that the Pi Omega Chapter organized the Mechanical Engineering Career Fair, the first career fair of its kind at Berkeley specifically targeted for mechanical engineering students. The purpose of this career fair was to cater to the specific needs of Mechanical Engineering students by giving them a setting to recruit and learn more about the different types of companies in the industry. The summer before the fall, members of our Industry Committee (IR) focused on contacting companies that worked in areas such as design, construction, product development, automotive vehicles, electronics, and research so students would be able to find a company that they would love to be a part of. The companies that attended were:

i) Microsoft
ii) Apple
iii) Tesla Motors
iv) KLA Tencor
v) Glumac
vi) Alloy Product Development
vii) LAM Research
viii) BIO Rad

***ME Career Fair Flier***

The event was greatly received by both the ME department and the students. Over 300 undergraduate and graduate students interfaced with these companies as they looked for internships and full-time positions. Most of these groups have expressed interest in returning for the Fall 2012 fair, which has an expected attendance of around 20 companies.

### b. Professional Workshops

During the Spring 2012 semester, the Pi Omega Chapter started a new series of workshops designed to aid students to build themselves as professionals and succeed in obtaining internships and full-time opportunities. The Industrial Relations Committee led the development of these workshops, successfully holding three separate workshops. With spring career fairs approaching, the first workshop, the Engineering Industry Skills Workshop, focused on teaching key techniques and inside secrets that lead to career success as well as small group discussions to focus resume tips, the STAR Method, and career fair “do’s and don't’s”. The second professional workshop was centered on technical interviews for mechanical engineering students, highlighting the type of questions to expect from interviews and how to best answer them. Overall, the workshops were greatly received by the department and student body with over 40 students in attendance for both events.

### c. Company Information Sessions

Company Information Sessions were held during both semesters as companies recruited on campus for full-time positions and internship opportunities. During these events, company representatives come to enlighten the students about their companies and discuss personal stories from industries which gave students valuable insight into the different aspects of a company. In addition, the students were encouraged to ask questions about the companies and bring their resumes. This past year, the Pi Omega Chapter hosted info-sessions for Apple’s Product Development Team and Camera Team, Jet Propulsion Laboratory, British Petroleum, SanDisk, Microsoft, and many more companies.

## II) Outreach Programs and Community Service

Each semester, all pledges are required to participate in two outreach events that focus on bettering the Berkeley community. Along with the pledges, each active officer must also complete an outreach event in order to keep the value of Service strong within the chapter.

This year, the Pi Omega Chapter started a program called the Freshman Outreach Program. The program is designed to help incoming freshmen and junior transfers adjust to the life at Berkeley. New students are paired with chapter officers and members. Throughout the semester, mentors maintain email contact with their mentees and meet in person to discuss all aspects of instruction, including student life, extracurricular, and advice on academics. At the start of the program, our chapter had six mentees and more are planned to sign-up for the next semester.

***Engineering for Kids Day: Building Towers***

One of our most popular outreach events is the Berkeley Marina Clean-Up which was started in the

previous year. PTS Officers and pledges and members of other engineering student organizations such as Society of Women Engineers and Theta Tau join together to record and remove waste from the Berkeley Marina.

In addition to cleaning our community, our chapter still continues to work with Berkeley Engineers and Mentors (BEAM). Their goal is to educate Bay Area high school students in concepts of science and engineering and highlight how exciting these topics can be.

During the fall semester, members of the Pi Omega Chapter participated in the weekly service event, "Bike Day," which is hosted by the student organization, Citizen Cycle. At every event, volunteers offer free assistance and advice to anyone who has a bike problem or looking to learn more about bikes. Moreover, the volunteers also assist Citizen Cycle members by performing basic bicycle repairs.

Lastly, the Pi Omega helped host Engineering for Kids Day (E4K). Mentors taught elementary and middle school students engineering concepts by helping them perform a certain task. This event was very popular and the ME department urged our chapter to help host this event every year.

***Engineering For Kids Day: Working in Teams***

## III) Student Relations

The Student Relations Committee of our chapter is responsible for helping both the Mechanical Engineering student body and the Mechanical Engineering department. Its many tasks include holding review sessions, organizing and hosting the ME Department Town hall Meeting and managing the California Pi Omega test bank.

### a. Tutoring, Review Sessions, and Office Hours

Each semester, the Student Relation's Committee (SR Committee) top priority is to provide academic support to mechanical engineering students by holding tutoring hours, Exam reviews, and weekly officer hours for classes throughout the curriculum. In the spring, the SR Committee created a new pledge requirement where pledges could either write their own review question for a mechanical engineering class or create a review sheet for a midterm. By doing this, Pi Omega's review material greatly increased. During the fall semester, office hours, held in the mechanical engineering computer lab, were very popular among the students as they were able to ask questions related to any class. This past spring, both our Fluid Dynamics and Thermodynamics review sessions were highly attended.

### b. ME Department Town Hall Meeting

The Pi Omega chapter organized and hosted the Town Hall meeting where students were able to discuss topics about aspects of the curriculum and future plans with ME professors and department administrations in an open forum setting. Both semesters, over 40 students and about 15 professors attended to offer their thoughts on the discussed topics. The Chair of the Mechanical Engineering Department and Vice Chair of Instruction attend and are part of the main teacher panel.

### c. Freshmen Mentoring Program

The Freshmen Mentoring program is organized by the SR Committee to help incoming freshmen and junior transfer adjust to Berkeley and successfully transition to Berkeley Engineering. New students that participate are paired with chapter officers and members. Throughout the semester, these mentors maintained email contact with the mentee and meet in person to discuss all aspects of instruction, including student life, extracurricular, and advice on academics.

### d. Undergraduate Advising Day

During the class registration period at Berkeley, the ME department organizes an undergraduate advising day where professors help students finalize their class schedules for the next semester. In addition to the professors, officers and members host a peer advising table at the same time to offer more personalized advice and student opinions on classes and extracurricular activities.

### e. Test Bank

At the end of the Fall semester, the Pi Omega Chapter's test bank was made private in order to avoid conflict with professors about using their test material. A conflict had arisen prior to this due to the fact that these past exams were considered intellectual property. In the following months, the Pi Omega Chapter worked actively with the ME department in order to create a public test bank with official rights to post exams in a public portal. To do this, the Student Relations Chair created "The Test Bank Waiver Form" which was given to all Mechanical Engineering professors. The chapter successfully received over 25 signed forms allowing the Pi Omega Chapter to post past exams and midterms onto the online test bank. The official Pi Omega Chapter test bank will become public at the beginning of the Fall 2012 semester.

## IV) Chapter Meetings

Each semester, there are three General Meetings (GMs) where both officers and pledges are required to attend. In order to build professionalism within the chapter, a professor speaks about a topic of his or her choice. These topics usually involve their research and its applications in the real world, but other lectures have touched upon topics such as the responsibilities of engineers in society, possible innovations in a specific field, and the steps to become an effective leader. At the second meeting, a chapter-wide building project takes place to help foster teamwork and cooperation between active members and the pledges and to serve as an ice-breaker. During the third GM, pledge groups give presentations about their pledge projects and show a quick video demonstrating their projects.

***General Meetings***

In addition to chapter meetings, officers and members attend weekly meetings to handle chapter logistics and discuss semester projects within each committee. This past year, such projects included the Mechanical Engineering Career Fair, the Test Bank, and academic office hours.

## V) Social Activities

During each semester, the chapter invites members and pledges to attend social events in order to build and strengthen bonds within PTS. Some of the events are highlighted in the pledge project, but other events are planned afterwards as well. Many members and pledges attend about two to three social events each semester. Below are some of the popular events that were held this past year.

i) Karoke
ii) Trampoline Gym
iii) Bowling
iv) Game Night
v) Ice Skating
vi) Engineering Sports Night
vii) LAN Party/Video Game Night
viii) Ramen Eating Contest

***Trampoline Gym***

***Bowling***

### VI) Officer Retreat and Weekly Dinners

At the beginning of each semester an officer retreat is held to help integrate new incoming officers into the chapter. The retreats are very fun excursions, usually consisting of road trips to national parks and full of outdoor events. During the fall semester, the chapter visited Yosemite National Park for a weekend where members hiked and ventured the park, immersing themselves in the natural landscape. In the spring, the chapter visited Lake Tahoe. Officers enjoyed skiing and snowboarding, snowball fights, snow football, billiards, and *Dance Dance Revolution* on a Kinect-enabled Xbox 360.

***Officer Dinner at a local Wing Stop***

Furthermore, each week the Activities chair would randomly choose an officer to pick the location for that week's chapter dinners. At these dinners, members, officers, and pledges alike were able to enjoy different types of food as they mingled and enjoyed each other's company. The only rule was that there can be no repeated restaurants.

### VII) National Convention Participation

This year, five Pi Omega Chapter members, including the President, External Vice President, and senior officers, attended the Pi Tau Sigma National Convention at San Jose State University. The members participated in a breakout session and networked with student leaders from other PTS chapters. At this convention, Michael Nill received the individual student scholarship and the Pi Omega Chapter received both Best Report for 2010-2011 and award for Outstanding Service.

### VIII) Information Technology

The Information Technology Committee managed the Pi Omega Chapter's website: http://pts.berkeley.edu/

## C) Other Information

### I) Plans for the 2012-2013 School Year

During the last meeting of the semester, each committee discussed projects and plans for the upcoming 2012-2013 school year. One of the major projects of the next year is to hold the second annual Mechanical Engineering Career Fair. With such a strong praise from the department and students and verbal confirmations from companies to attend, the second career fair will be much bigger. The Industry Committee hopes to have at least 15 companies attend and is planned to be held sometime in late September. Moreover, the Industry committee will continue to host the Professional Engineering Workshop which helped students learn to successfully recruit for summer internships and fulltime positions. The Student Relations committee hopes to expand the program by holding officer hours and review sessions for more

classes and creating an online bank of review material apart from past exams. Furthermore, the SR Committee will work to resolve the Test Bank issue as discussed above and have the PTS Test Bank go public this upcoming fall. In addition, the Outreach Committee is planning to host more events in partnership with other on-campus organizations in order to diversify the type of outreach the PTS members take part in. This will greatly strengthen the sense of service within the chapter.

As the end of the 2011-2012 semesters came to close, there are many great projects planned for the following next year. With an extremely able and qualified incoming officer corps for next semester, the Pi Omega Chapter will set new standards with each of its accomplishments.

## II) 2012 Graduates and Plans

| | **Plans for Next year** |
|---|---|
| Ford, Matt | Pursuing PhD at Northwestern |
| Bhogal, Suraj | Pursuing 5th year Masters at UC Berkeley |
| Chambers, Darren | Working at Imprint Energy (Alameda/Berkeley) |
| Chang, Valerie | Pursuing 5th year Masters at UC Berkeley |
| Chung, Scott | Pursuing CS master's at Stanford |
| Emori, Noboru | Pursuing 5th year masters at UC Berkeley |
| Eng, Amanda | Working at Boeing (S&IS) |
| Gotianun, Chris | Pursuing 5th year Masters at UC Berkeley |
| Haji, Maha | Pursuing Graduate School at MIT |
| Jenkins, Kevin | Working at Boeing (BDS) |
| Krieger, Will | Pursuing Graduate School at Georgia Tech |
| Mitchell, Sean | Pursuing 5th year Masters at UC Berkeley |
| Miyakawa, Alec | Joining the USMC, officer |
| Moore, Katie | Pursuing 5th year Masters at UC Berkeley |
| Owoc, Garrett | Working at Applied Materials (Etch) |
| Redelsheimer, Elena | Working at Taylor Laboratories |
| Scott, Stephanie | Pursuing Graduate School at MIT |

## III) Awards and Recognition

***a. 2011-2012 Excellence in Teaching Award***
Award Recipient: Professor George Anwar

***b. Fall 2011 Officer of the Semester***
Award Recipient: Valerie Chang - External Vice President

***c. Spring 2012 Officer of the Semester***
Award Recipient: Michael Nill - External Vice President

## IV) Contact Information

***Reporter:*** Darshan Kasar (Spring 2012 President)

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***Chapter Website***

http://pts.berkeley.edu