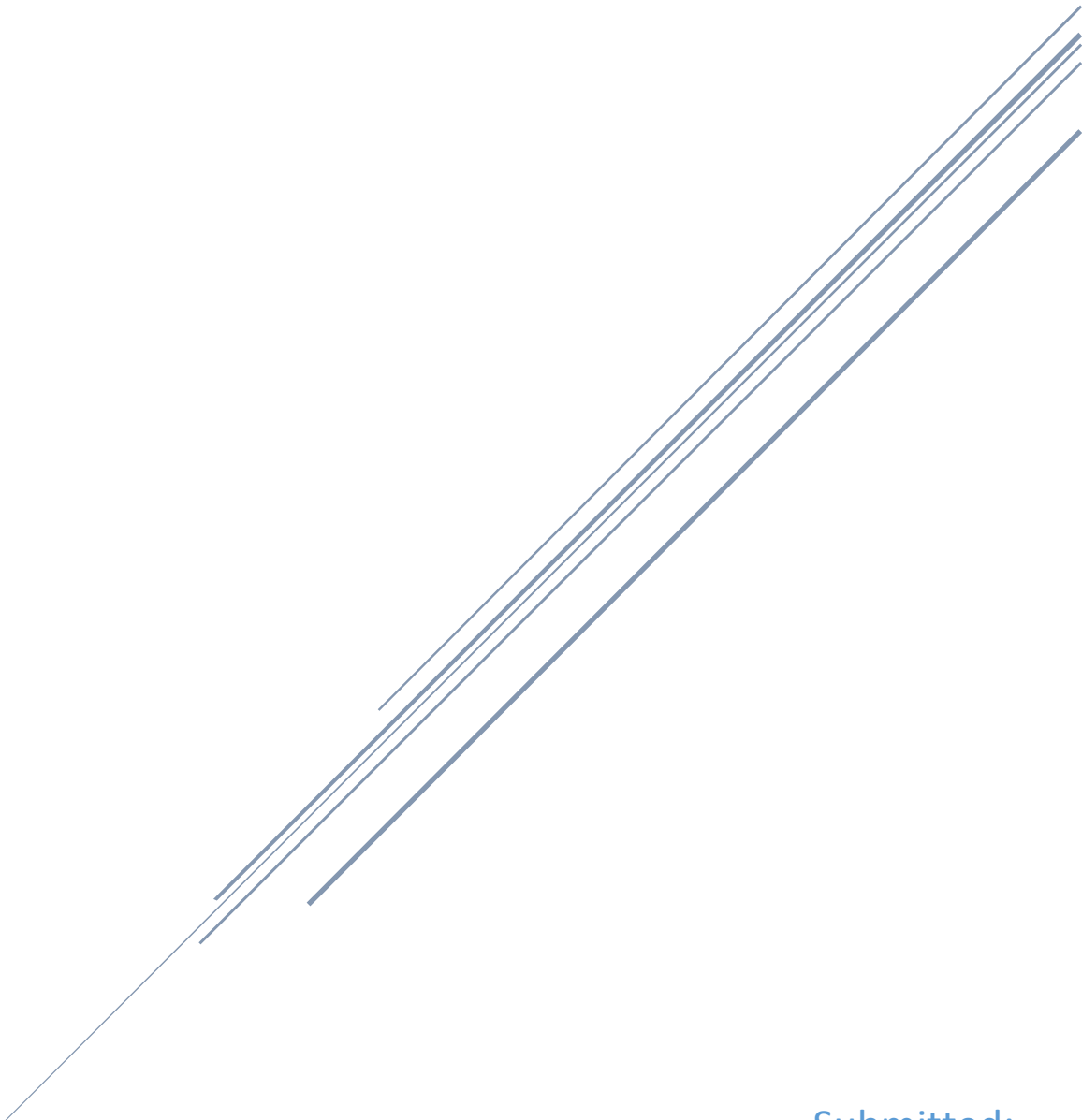


THE UNIVERSITY OF ARIZONA STUDENT CHAPTER OF KERAMOS

2016-2017 Annual Report



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1. Chapter Adviser Executive Summary

Last year we graduated a record number of students, and in anticipation of lowered total student involvement, we elected officers early so that both sets of officers would co-organize and govern during the last couple of months. Unfortunately, first semester the Keramos President became ill and during the second semester was replaced, as were some of the other officers who felt overburdened during the first term. Next year we again face falling enrollment in the Department of MSE, and the few students we have are apathetic about shouldering the time commitments and responsibilities of supporting either Keramos or Materials Advantage.

Second semester the new officers, held two outreach events for high schools schools, offered three pizza night review sessions in the undergraduate student lounge for UofA freshmen and sophomores taking the class, MSE 110 Introduction to Materials Science. We gave demonstrations in the glass lab and foundry to complement the departmental open house organized to attract students to the MSE Department. Second semester, Keramos officers worked with other clubs to provide aid on projects; such as, carbon-fiber lay-up for the human-powered vehicle. A student-faculty barbecue was held at the Arizona Materials Lab during the first semester, and, in late April, we are holding a glass lab open house with glassblowing demonstrations and featuring food cooked in a Tibetan steatite-clay-composite brazier and cookpots and in Sichuan mullite-rich soup pots and hot-pots.

After receiving the Materials Science Classroom Kit in late November and distributing online and hard copies of the manual to students in January, and several Keramos members reviewed the manual. The Keramos officers as part of the high school outreach program began to contact local high school science teachers, but a lack of Keramos member participation meant that Keramos officers could only scheduling more visits.

Keramos student officers have made suggestions for next year that include the following: (1) Provide an incentive for the students to participate that involves the MSE faculty. For instance, giving 5-points of extra credit at the end of the semester if Keramos and Materials Advantage member participate in a few high school outreach events, because "...but just telling them that it will help them doesn't seem to excite them about doing community service or outreach." (2) Faculty could help the club with industry contacts because "...we believe there are MSE companies willing to help fund some type of project, but the students have no idea who to start asking. The biggest draws of other clubs are yearly projects, such as: Baja challenge, Formula car, Concrete Canoe. Keramos and Materials Advantage used to have the solar car project as a focus. Some students started working on the mug drop and disk golf, but failed to follow through to the competition." (3) Our faculty adviser could have monitored the students a closer to make sure they were staying on top of all the club responsibilities. We have had a problem with members agreeing to do something and dropping the ball, and a push from their peers did not work, leaving the president and other officers to pick up all the slack. Hopefully, if that push comes from a professor whom the students look up to, they may feel more pressure to complete their tasks.

Next year Professor Vandiver will be on sabbatical, and Professor B.G. Potter will be our returning advisor.

2. Annual Plan for the Upcoming Academic Year

2.1 Objectives

In the coming academic year, a lot of work needs to be done in the areas of recruitment within the college, community outreach, and community service. It will require the help of our advisor as well as other faculty within our department due to the small enrollment in the Materials Science and Engineering. The primary objective for the University of Arizona chapter will be to increase the number of students who share a passion for materials science and engineering.

To accomplish this goal, the chapter plans to increase the number of social events throughout the year. These events will include more student faculty mixers, pizza study nights, and the department cookouts. It is believed that if the number of opportunities for students to socialize is increased and promoted by the faculty, more students will attend the events. This will in turn make more students feel welcome in the department as well as giving the faculty more opportunities to explain the research that is being conducted within our department. Hopefully, with a more relaxed atmosphere outside of the classroom new students will have the opportunity to connect with more of their peers as well as professors.

Student-hosted review sessions are events that the chapter will continue to hold. In the past we have had trouble with students of different class-year students forming their own groups and not making the effort to involve more people in their events. Our chapter believes that the student-run review sessions are a great way to break down the barrier between underclassmen and upperclassmen. It is imperative that we as a department and a chapter do all that we can to help the incoming class feel comfortable asking questions and seeking advice; if we wish them to be successful in their education as MSE majors.

It has not yet been decided which engineering project our chapter will get involved with, but our current officers would like to see our chapter take on a semester long project with the help of our faculty advisor. This project may be a combined effort with another club on campus for example our chapter could help the Human Powered Vehicle project again next year. No matter the project, we will encourage members of our chapter to contact clubs on campus to make more people aware of the opportunities provided by Keramos membership.

2.2 Professional Conferences

The Materials Science and Technology conference has been the most anticipated event of the year for our chapter, and we hope it will stay that way. MS&T is one of the most well-rounded materials science conferences that our chapter has attended; it offers the widest variety of symposiums and has one of the best student mixers. Unfortunately, we were not able to participate in the Mug Drop or the Disk Golf contest in Salt Lake City, as our 3-person team planned, but failed to follow through, but we hope to spark the

interest of incoming students and have a team to represent our chapter in these competitions.

For MS&T 2016 we sent 5 members, thanks to the funding from the national Keramos chapter convocation, The University of Arizona's Engineering Student Council (ESC), and the Associated Students of the University of Arizona (ASUA). It is our mission to increase the number of funding sources and send more students to MS&T 2017. If we can find the funding that we are seeking, we also plan to send students to some of the other conferences. These would include events hosted by The Minerals, Metals, and Materials Society (TMS) as well as the Materials Research Society (MRS); as officers and attendees of each conference we feel that it is important for students to get as much exposure to these events as possible because each one offers some different experiences and networks in the Materials Science and Engineering community.

3. List of Officers, Delegates, and Alternates for the Coming Academic Year

Unfortunately, we do not have incoming students to fill these positions. To make matters worse all the students currently occupying officer positions will graduate in May 2017. Our faculty advisor, academic advisor, and department head are all aware of the lack of interest from the incoming class. We have been working hard and will continue through the end of the semester to find students who are self-motivated and willing to take on the responsibilities of being officers of our chapter. When these students are initiated and elected as officers, a list will be created and sent to the national committee.

4. List of Active Members

We are sad to report that there have not been any new members initiated into our chapter this year. But we are pleased to announce that 16 of our current members will graduate from the University of Arizona in May of 2017, and that seven members have chosen to further their education in Materials Science and Engineering beyond the B.S.

5. Treasurer's Report

Over the course of the year, many different spending endeavors included mainly meeting attendance. It has been the responsibility of the treasurer to keep accurate records of all transactions that our chapter has made, unless otherwise delegated to another officer.

Due to the excellent work of our treasurer, president and advisor, we found enough funding to fully reimburse our members who attended MS&T as well as the Fall MRS meeting in Boston.

Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
5/31		Monthly Service Fee		14.00	248.15
Ending balance on 5/31					248.15
Totals			\$0.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
6/30		Monthly Service Fee		14.00	234.15
Ending balance on 6/30					234.15
Totals			\$0.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
7/29		Monthly Service Fee		14.00	220.15
Ending balance on 7/31					220.15
Totals			\$0.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
8/31		Purchase authorized on 08/29 Fedexoffice 0000 800-4633339 TX S586242840659507 Card 7156		51.17	
8/31		Monthly Service Fee		14.00	154.98
Ending balance on 8/31					154.98
Totals			\$0.00	\$65.17	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
9/30		Monthly Service Fee		14.00	140.98
Ending balance on 9/30					140.98
Totals			\$0.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
10/20		ATM Check Deposit on 10/20 U of A Student Union Tucson AZ 0008479 ATM ID 9945M Card 7156	300.00		440.98
10/31		Monthly Service Fee		14.00	426.98
Ending balance on 10/31					426.98
Totals			\$300.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
11/1		ATM Check Deposit on 11/01 U of A Student Union Tucson AZ 0001531 ATM ID 9945M Card 7156	302.00		728.98
11/30		Monthly Service Fee		14.00	714.98
Ending balance on 11/30					714.98
Totals			\$302.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
12/30		Monthly Service Fee		14.00	700.98
Ending balance on 12/31					700.98
Totals			\$0.00	\$14.00	
Date	Check Number	Description	Deposits/ Credits	Withdrawals/ Debits	Ending daily balance
1/31		Monthly Service Fee		14.00	686.98
Ending balance on 1/31					686.98
Totals			\$0.00	\$14.00	

<i>Date</i>	<i>Check Number</i>	<i>Description</i>	<i>Deposits/ Credits</i>	<i>Withdrawals/ Debits</i>	<i>Ending daily balance</i>
2/2		ATM Check Deposit on 02/01 U of A Student Union Tucson AZ 0007068 ATM ID 9945M Card 7156	2,836.37		3,523.35
2/6	1001	Deposited OR Cashed Check		600.97	
2/6	1002	Check		550.20	2,372.18
2/8	1003	Check		1,267.00	1,105.18
2/13	1004	Check		418.20	686.98
2/28		Monthly Service Fee		14.00	672.98
Ending balance on 2/28					672.98
Totals			\$2,836.37	\$2,850.37	
<i>Date</i>	<i>Check Number</i>	<i>Description</i>	<i>Deposits/ Credits</i>	<i>Withdrawals/ Debits</i>	<i>Ending daily balance</i>
3/31		Monthly Service Fee		14.00	658.98
Ending balance on 3/31					658.98
Totals			\$0.00	\$14.00	

Current Total : \$644.98

6. Chapter Activities From 2016-2017 Year

The following events are listed in the order that they were held starting in August 2016 and continuing up to the present.

6.1 MS&T 2016

We are proud to announce that we fully funded 5 members who attended MS&T in Salt Lake City. Before the event took place, our Vice President and Treasurer attended the Keramos Annual Convocation and Business Meeting where they reported our chapter's activities since the last MS&T. This took place with an audience of the other chapters' officers and the national Board of Directors. Our officers returned from the meeting with many great ideas in mind thanks to the other chapter's presentations. Three of our members gave papers at the sessions sponsored by the AACS Division.

6.2 Department Cookout

Every year Keramos and Materials Advantage work together to host a cookout for our entire MSE department. This last year we hosted the barbecue at the Arizona Materials Lab and had a wonderful turnout.

6.3 High School and Elementary School Outreach

Giving short presentations and demonstrations to reach out to high school and elementary school students and to tell them about materials science and engineering is something that we have been working to restart in our chapter this year. In the past our Keramos chapter has been involved with different types of community outreach that expanded to involving elementary schools. This last year we worked hard to create contacts with high schools and to schedule lunch-time demos and presentations to math and physics clubs. The high school faculty who saw our two presentations enjoyed them and have extended open invitations for next year.

6.4 Departmental Open House for College of Engineering Freshmen

Each semester our college's Introduction to Engineering class schedules an event for the incoming class of engineers, where they investigate choices of possible majors. This event extends through all the departments in the College of Engineering and is presented as an open house where the new students get an evening to attend presentations from different departments. The aim is to expose students to the different fields of engineering and give them a preview of the curriculum that they may wish to explore. This year members of Keramos and Materials Advantage had the honor of presenting.

6.5 Materials Research Society Conference

We are pleased to announce that this year at MRS Fall Meeting 2016 in Boston, two members presented their research in the Materials Issues in Art and Archeology symposium TC3 and that both have had their first research papers published in the Materials Advances series. The event, thanks to our faculty advisor, enabled our members to be introduced to many different professors and researchers in that field of study. We also participated in a workshop on reverse engineering ancient window glass at the M.I.T. Glass Lab.

6.6 MSE-110 Review Sessions

Our members ran test review sessions for MSE110 Introduction to Materials Science, our introductory materials science course that also include pizza. The review sessions was a great success. We held 3 sessions over the course of the spring semester, each with 15 or more undergraduate attendees.

7. Summary

Over the last academic year, the Keramos student chapter has positively impacted the University of Arizona, the local community, and our own department. We hope that increasing the involvement of faculty in our department and recruiting the incoming students will continue that positive impact. This Keramos chapter has so much to offer its members and the students in the MSE department. Although our last year was productive, we believe we could do so much more. We have a history of other events that we did not get to host due to a lack of commitment from our members and a lack of interest from new students. We hope that the next set of members and officers will find the time and motivation to achieve more than we have in the last year.