

## VITERBI SCHOOL OF ENGINEERING

# Renewal Document

*The Associated Students of Biomedical Engineering*

*University of Southern California*

### A. Faculty Advisors Information

- i. Name: Dr. Michael Khoo
- ii. Email Address: [khoo@usc.edu](mailto:khoo@usc.edu)
- iii. Title: Interim Co-Chair of, Department of Biomedical Engineering and Dean's Professor of Biomedical Engineering & Pediatrics

### B. Ten Core Student Members' Information

Name	Email	Chapter Position (if applicable)
Arjun Aron	<a href="mailto:arjunaro@usc.edu">arjunaro@usc.edu</a>	President
William Kristian Bostic	<a href="mailto:wbostic@usc.edu">wbostic@usc.edu</a>	Treasurer
Rachel Brockman	<a href="mailto:rkbrockm@usc.edu">rkbrockm@usc.edu</a>	Corporate Chair
Advaita Chandramohan	<a href="mailto:archandr@usc.edu">archandr@usc.edu</a>	Community Chair
Nicolas Enriquez	<a href="mailto:naenriqu@usc.edu">naenriqu@usc.edu</a>	BMES Liaison
Sabrina Sy	<a href="mailto:sdsy@usc.edu">sdsy@usc.edu</a>	Vice President
Grace True	<a href="mailto:gtrue@usc.edu">gtrue@usc.edu</a>	Mentorship Chair
Celine Vazquez	<a href="mailto:celineva@usc.edu">celineva@usc.edu</a>	Viterbi Liaison
Neha Yadav	<a href="mailto:nryadav@usc.edu">nryadav@usc.edu</a>	Public Relations Chair
Winfield Zhao	<a href="mailto:wtzhao@usc.edu">wtzhao@usc.edu</a>	Research Chair

### C. Website Links

- i. Student Chapter Website: <https://www.asbmeusc.com/>
- ii. BME Department Website: <https://bme.usc.edu/>

### D. One Free Student Membership Information

New Membership or Renewal?	Email	Name	University	Graduation Year	Gender	Ethnicity
Renewal	<a href="mailto:sdsy@usc.edu">sdsy@usc.edu</a>	Sabrina Sy	University of Southern California	2023	Female	Asian

# CHAPTER DEVELOPMENT REPORT

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*The Associated Students of Biomedical Engineering*

*University of Southern California*

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2021 – 2022 Academic Year

**Corresponding Author:**

Sabrina Sy

Chapter President

Email: [sdsy@usc.edu](mailto:sdsy@usc.edu)

Phone: (323) 266-6228

**Faculty Advisor:**

Dr. Michael Chee-Kuan Khoo

Interim Chair – Biomedical Engineering Department

Email: [khoo@usc.edu](mailto:khoo@usc.edu)

Phone: (213) 740-0347

The Associated Students of Biomedical Engineering (ASBME) is a student-run organization focused on serving the undergraduate biomedical engineering community at USC by designing a comprehensive calendar including social, academic, outreach, mentoring, and professional events. Our programs allow students to explore the opportunities in the biomedical engineering (BME) field. In addition to maintaining and improving our flagship events like the Makeathon, Corporate Dinner, and BIOMED Research Symposium, we focused on fostering a sense of community among our members as we transitioned back into an in-person academic year, expanding exposure to career opportunities across a variety of disciplines, and integrating diversity, equity, and inclusion programming into our rigorous calendar of events. ASBME held 12 industry and professional development events over the course of the year, including a technical workshop series and a number of lab tours with research departments from the BME department. We facilitated USC first hybrid undergraduate medical device design competition, allowing our participants to access both in-person fabrication spaces and the expertise of alumni, design experts, and engineers from across the nation. For the first time ever, we hosted a book club solely focused on creating discussions centered around inequities in healthcare and how biomedical engineers play a role in combating this. We also planned the most ambitious slate of social programming in ASBME's recent history, which helped students feel energized and engaged with their peers. We strive to continue expanding our agenda of events to meet the diverse needs of our members in coming years.

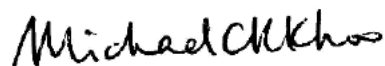
May 25, 2022

To the Student Chapter Award Committee Members,

I am writing this letter in my capacity as Interim Co-Chair of the Biomedical Engineering Department to express my strongest support for the renewal of the BMES Student Chapter at USC, which takes the form of the Associated Students of Biomedical Engineering (ASBME). ASBME was established decades ago at USC as a student organization serving undergraduate students in BME by organizing academic, social, mentorship, community outreach, and corporate events. Through ASBME's events, students gain insight into their chosen field of study and the opportunities that being a BME major brings. The key events that ASBME holds every year include: (a) the BIOMED Research Symposium, in which BME faculty or affiliated faculty from USC Keck School of Medicine are invited to talk about their ongoing research as well as their career paths; (b) Fall Networking Night and Spring Corporate Dinner, where BME students are given the opportunity to meet and network with representatives of biomedical companies in the Southern California region, many of whom are alumni from USC-BME; and (c) the Makeathon competition where BME students, working in teams, get to brainstorm, design, and prototype a device under time, material, and functional constraints. There have been a host of many other events, such as the technical workshop series, professional development events to help students prepare for internships and job interviews, and mentorship programs that pair senior students with more junior students. There are also social events sponsored by ASBME that include outdoor hikes, game nights, beach volleyball, Thanksgiving dinner, and a Valentine's Day party. ASBME also holds joint activities with other student organizations, such as MEDesign, UCLA's Biomedical Engineering Society and Makers, to allow USC BME students to meet students from other engineering programs within USC or BME programs outside of USC. ASBME members have also been actively involved in outreach activities to teach young children science and technology, as well as introducing kids to better understand what biomedical engineers do. Over the past couple of years, many in-person activities were curtailed, but creative ways of holding events online were introduced.

All in all, ASBME has played a critical role in enriching the academic and college-life experience of our BME undergraduate students. At the ABET-renewal site visit last year, the evaluator for BME lauded ASBME as a key "strength" of the BME program at USC. The BME faculty at USC whole-heartedly agree with this view.

Yours sincerely,



Michael C.K. Khoo, PhD  
Dean's Professor of Biomedical Engineering  
Professor of Biomedical Engineering and Pediatrics  
Interim Co-Chair, Department of Biomedical Engineering.



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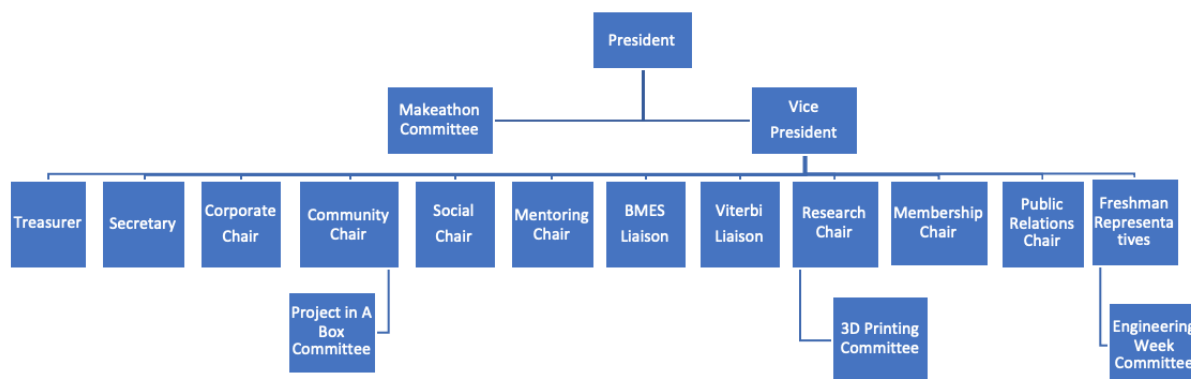
## I. Administrative Report

To put on excellent events for our members, the University of Southern California's BMES student chapter must run as efficiently as possible. Responsibilities are divided amongst a 16-member Executive Board. Every Executive Board member is required to plan at least one general meeting in addition to the duties that are associated with his/her given position. To organize our documents, ASBME uses a master Google Drive, containing transition documents from past officers, guidelines specific to each position, a master calendar containing all event dates and deadlines, and other resources such as officer contact information and helpful website links and passwords. Additionally, ASBME holds two Executive Board orientations during which board members are guided through the Google Drive and reminded of their responsibilities. One-on-one meetings are also conducted at the end of the academic year in which the President meets with every board member to review his/her performance.

### 2021-2022 Officers

Position	Name	Email	Phone
President	Arjun Aron	<a href="mailto:arjunaro@usc.edu">arjunaro@usc.edu</a>	(216) 548-7871
Vice President	Sabrina Sy	<a href="mailto:sdsy@usc.edu">sdsy@usc.edu</a>	(323) 266-6228
Secretary	Christopher Liu	<a href="mailto:christzl@usc.edu">christzl@usc.edu</a>	(916) 936-9921
Treasurer	William Kristian Vu Bostic	<a href="mailto:wbstic@usc.edu">wbostic@usc.edu</a>	(714) 365-0338
Membership Chair	Chur Tam	<a href="mailto:cmtam@usc.edu">cmtam@usc.edu</a>	(480) 330-6939
Corporate Chair	Rachel Brockman	<a href="mailto:rkbrockm@usc.edu">rkbrockm@usc.edu</a>	(408) 420-8241
Mentoring Chair	Grace True	<a href="mailto:gtrue@usc.edu">gtrue@usc.edu</a>	(925) 389-4592
Community Chair	Advaita Chandramohan	<a href="mailto:archandr@usc.edu">archandr@usc.edu</a>	(858) 284-7770
Social Chair	Matthew Clauss	<a href="mailto:mclauss@usc.edu">mclauss@usc.edu</a>	(816) 585-7343
Public Relations Chair	Neha Yadav	<a href="mailto:nryadav@usc.edu">nryadav@usc.edu</a>	(707) 741-1847
BMES Liaison	Nicolas Enriquez	<a href="mailto:naenriqu@usc.edu">naenriqu@usc.edu</a>	(760) 310-3134
Viterbi Liaison	Celine Vazquez	<a href="mailto:celineva@usc.edu">celineva@usc.edu</a>	(323) 767-6907
Research Chair	Winfield Zhao	<a href="mailto:wtzhao@usc.edu">wtzhao@usc.edu</a>	(760) 560-6718
Freshman Representative	Lauren Tomita	<a href="mailto:ltomita@usc.edu">ltomita@usc.edu</a>	(702) 741-7903
Freshman Representative	Nancy Shao	<a href="mailto:nhshao@usc.edu">nhshao@usc.edu</a>	(832) 398-9842
Freshman Representative	Michael Lee	<a href="mailto:mikejlee@usc.edu">mikejlee@usc.edu</a>	(626) 421-8404

### Officer Responsibilities Management Tree



## Membership

Total Members	Local Membership %	National Membership %
160	70.625%	8.75%

## General Body Meetings

Date	Event	% Attendance	Event Type
Aug 31, 2021	GM 0: Welcome!	18.13%	Outreach
Sept 14, 2021	GM 1: Research as a Biomedical Engineer	21.88%	Academic/ Professional
Sept 28, 2021	GM 2: Corporate Cheat Sheets	26.25%	Professional
Oct 12, 2021	GM 3: 3D Printing	16.88%	Academic/Professional
Nov 2, 2021	GM 4: Diversity and Identity in BME	7.5%	Academic/Outreach
Nov 16, 2021	GM 5: Movie Night	10.63%	Social
Jan 18, 2022	GM 0.2: Welcome!	18.13%	Outreach
Feb 2, 2022	GM 1.2: Seniors' Declassified BME Survival Guide	14.77%	Academic
Feb 15, 2022	GM 2.2: Exploring Options Beyond Industry for BMEs	8.75%	Academic/Professional
Mar 1, 2022	GM 3.2: Bridge Building Competition	7.5%	Social
Mar 8, 2022	GM 4.2: Breaking Down Your Emphasis	11.25%	Academic
Mar 22, 2022	GM 5.2: Spikeball	12.5%	Social
Apr 5, 2022	GM 6.2: Medical School Application Timeline	5.625%	Academic
Apr 19, 2022	GM 7.2: Letter Writing	7.5%	Social

## Executive Board Meetings

Executive board meetings are held every Wednesday to ensure we are keeping up with our comprehensive calendar of events. The meetings are generally structured to have the following sections: Attendance, general reminders, old events debrief, upcoming events, officer updates, and additional thoughts/announcements. An example meeting agenda can be found below.

### Example Meeting Agenda:

1. Attendance
2. General Reminders
  - a. Meeting times and locations, old action items, new action items
3. Old Events Debrief
  - a. Feedback, changes for future, Post-Event Forms, reimbursement, Calendar update.
4. Upcoming Events
  - a. Schedule, food, speaker confirmation, help needed, advertisement, additional details.
5. Officer Updates
  - a. (All Chairs update goal progress, upcoming needs, new ideas)
6. Additional Thoughts/Announcements

## II. Treasury Report

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ASBME has maintained a budget to sustain and continue to grow such a successful and enriching organization. In order to offer a variety of programming and opportunities to its members, this chapter budgets accordingly, and applies for grants and funding to organize large events. This chapter receives funding from a wide range of sources to provide for as many students as possible as listed below. In future years, we plan to continue to optimize our careful budgeting techniques while expanding our funding sources in order to host larger events than ever before.

ASBME maintains sufficient funding for ongoing activities and overall maintenance of the chapter through various outlets. ASBME's funds consist mostly of chapter membership dues and sponsorships from the Biomedical Department and Alfred Mann Institute for Biomedical Engineering at USC, as well as Edwards Lifesciences. These funds are supplemented by funding acquired through applications to USC's Undergraduate Student Government and Viterbi Funding Board, granted on an event-by-event basis. ASBME's Treasurer prepares an annual budget at the beginning of the semester in order to allocate these funds where necessary, allowing the chapter to prepare for general meetings, corporate events, social events, and various other activities offered by the chapter.

### Funding Breakdown

ASBME maintains sufficient funding for ongoing activities and overall maintenance of the chapter through various sources. First and foremost, membership dues help to sustain costs associated with general meetings, corporate events, and social events. ASBME's Treasurer prepares an annual budget at the beginning of the academic year to allocate funding where necessary and allow the chapter to prepare for events going on throughout the year. Additionally, USC's Viterbi Funding Board allocates the money collected from the Student Activity Fee and supports academic and professional events offered by student organizations. We normally apply for funding through USC's Undergraduate and Graduate Student Government for larger events. We were also able to use USC Ignite, the university's fundraising platform, to raise money for various community outreach initiatives. We reached out to a number of university funding boards as well as corporate sponsors in order to obtain a diverse funding portfolio, which enables us to hold events of the highest quality that our members deserve.

### Sources of Funding

Source	Amount
Member dues	\$2405
Viterbi Funding Board	\$500
BME Department	\$763.24
Alfred Mann Institute	\$2000
Edwards Lifesciences	\$1000
Genentech	\$3000
<b>Total</b>	<b>\$9668.24</b>

\*Membership Dues: \$25 for the full year and \$15 for the semester

## Expenses

<b>Expense</b>	<b>Amount</b>
General Meetings	\$193.92
Miscellaneous Events	\$2,955.21
Fall Networking Night	\$763.24
Membership Shirts	\$905.02
BMES Conference	\$7,880.00
ASBME Website	\$135.85
E-Board Officer Nametags	\$131.30
Makeathon	\$9,353.16
<b>Total</b>	<b>\$22,317.70</b>

Expenses come from our 70+ events, the annual Makeathon, and other logistics and supplies like website fees and recruiting materials. Most expenses are fronted by our executive board members, who are then reimbursed by either the ASBME Credit Union Account or by the biomedical engineering department. Other methods of payment are purchase orders and internal requisitions organized by the Viterbi School of Engineering and the Undergraduate Student Government. A close approximation of our expenses this year is detailed above.

**Current Makeathon Account (Managed by the BME department): \$9,077.32**  
**Current General Funds Account (Managed by the BME department): \$7,941.50**



### III. Chapter Activities

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*The University of Southern California's BMES Chapter puts on a comprehensive calendar of academic, mentoring, social, community outreach, and professional events. We included our most notable events in this Chapter Activities section.*

*Our Industry and Professional Events provide students with opportunities to network with industry representatives. Our Corporate Dinner that we host in the spring brings together USC faculty, graduate students, undergraduate students, and industry representatives. Students are able to learn about the various engineering positions in industry and the distinct missions of biomedical companies. We are proud to report that our professional events have directly led to internship and full-time job offers for many students.*

*ASBME's social events have attracted a large proportion of the biomedical engineering student body because they are a great way for students to meet their classmates outside of the classroom. Our social programming was especially important this year to help foster a sense of community among BME students as we transitioned back on campus following an exclusively virtual academic year. As such, we hosted a wide variety of social events, including game nights, Thanksgiving Dinner, and a Valentine's Day party. These events have helped our members, particularly the freshman and sophomores, with finding friends and have allowed them to spend time with one another outside of the classroom.*

*We are always looking to provide students with valuable academic and professional opportunities. We organize research presentations by USC faculty and graduate students, including our annual kick-off event, the BIOMED Research Symposium. This year, our Research Chair also organized lab tours so students could learn more about the research that is conducted on campus. In addition, ASBME attends the annual BMES Conference, where students network with professionals in academia and attend seminars on recent advancements in the biomedical field.*

*The ASBME community is one of inclusion, collaboration, and mentorship. Our mentorship program pairs upperclassmen and underclassmen with similar interests, providing freshman and sophomore engineering majors with someone to help them navigate college and the biomedical field. This year, we increased participation in our mentorship program once again, with a record 19 groups participating in the program.*

*ASBME also continues to increase our biomedical engineering presence through our Community Outreach Initiatives and Recruiting Events. We participated in several recruiting events such as the Viterbi Get Connected Fair and the USC Involvement Fair to increase our membership. Our Project in a Box initiative, which is our primary outreach program, focused on delivering high-quality STEM lessons to young students at local schools in our South Los Angeles community. We also raised funds to stock L.A. community fridges to support those in our community.*

*The breadth of the biomedical major and industry can be quite intimidating to students, but ASBME is there to support them through their journey in college. If students have a social network to rely on in tough times and a source of job opportunities during the stressful recruiting season, they will be able to reach their full potential and attain their career aspirations.*

*\*Note: Percentages listed in parentheses in the following sections denote the percentage of ASBME members in attendance at each event.*

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### IIIA. Social or Other Activities

*ASBME had a very strong set of social events during this academic year. This was our most ambitious calendar of social events yet, especially with the introduction of regular game nights, social outings, and sporting events. As an organization, we consider it a priority to help students develop a social network outside the classroom with engaging events. We also made an effort to collaborate with other student organizations to help ASBME members not only make meaningful relationships with fellow biomedical engineering students, but also with other students at USC. The purpose of this social programming is to develop a tight-knit BME community and to help foster student relations within the engineering school and the university in general. By fostering these personal connections, ASBME hopes to further expand the BMES chapter at USC and broaden its impact within the university.*

#### 1. Game Night 1: Assorted Games

Our new Game Night Series was an initiative spearheaded by our Social Chair, Matt, who sought to create a regular time and space for BME students to meet each other and form lasting friendships. During our first game night, students were able to come and interact with other ASBME members. They played board games, such as Anomia, Fishbowl, and Coup. Attendees were divided into groups to allow students to meet each other and create conversations. Snacks were provided as well.

Audience: Students wanting to socialize and meet new people

Game Night 1: Assorted Games	September 9 <sup>th</sup> , 2021 7:00 – 8:00 PM	17 undergraduate attendees (10%)	Cost: \$20.98
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#### 2. Game Night 2: Social Jeopardy Night

This event was one of the many game nights that our social chair, Matt, hosted over the course of the fall semester. Students were broken up into teams to play a Jeopardy game, answering trivia questions to gain more points. The goal of this event was to provide ASBME members with a fun and welcoming environment to bind with each other, while still involving a competitive element.



Audience: Students wanting to socialize and meet new people

Game Night 2: Social Jeopardy Night	September 23 <sup>rd</sup> , 2021 7:00 – 8:00 PM	8 undergraduate attendees (5%)	Cost: N/A
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#### 3. Game Night 3: Trivia

Our social chair, Matt, planned a decades-themed trivia to challenge our members. Two teams of three people competed to answer the most questions during trivia night.

Audience: Students wanting to socialize and meet new people

Game Night 3: Trivia	October 7 <sup>th</sup> , 2021 7:00-8:00 PM	7 undergraduate attendees (4.38%)	Cost: N/A
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#### 4. Game Night 4: Pictionary

During this game night, Matt hosted a game of Pictionary for all attendees. Participants were able to have a lot of fun playing this simple, yet oftentimes, challenging game. Attendees reported enjoying this game, as it allowed them to exercise some creativity while still being in a competitive team environment.

Audience: Students wanting to socialize and meet new people



Game Night 4: Pictionary	October 21 <sup>st</sup> , 2021 7:00-8:00 PM	14 undergraduate attendees (8.75%)	Cost: N/A
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#### 5. Wisdom Tree Hike

ASBME members traveled to the Wisdom Tree in Cahuenga Park on a Saturday morning to start off the weekend with a hike. Although the hike was steep and strenuous for some, the event was overall enjoyable and allowed attendees to bond while getting in some physical activity. At the top of the peak, ASBME members were able to see a great view of LA and snap a photo at the titular Wisdom Tree. This was a successful iteration of a timeless ASBME tradition.

Audience: Biomedical engineering students interested in hiking and spending time with other BME individuals.



Wisdom Tree Hike	October 30 <sup>th</sup> , 2021 10:00 AM-1:00 PM	9 undergraduate attendees (5.63%)	Cost: N/A
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#### 6. GM 5: Movie Night

GM 5 was our last general meeting of the fall semester. In ASBME tradition, the GM was centered around relaxing before finals and taking a mini break, so we hosted a movie night where we watched Home Alone, just in time for the holidays. It was a successful event with 17 attendees and lots of snacks allowing for people to mingle and relax as the semester was winding down.



Audience: ASBME members interested in spending time with peers and relaxing before finals.

GM 5: Movie Night	November 16 <sup>th</sup> , 2021 7:00-8:00 PM	17 undergraduate attendees (10.63%)	Cost: N/A
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## 7. ASBME-AICHe Thanksgiving Dinner

ASBME planned and hosted the annual ASBME-AICHe Thanksgiving dinner to start the week of Thanksgiving with a social bang. Between the Snoop's drawn on the whiteboards and the Peanuts Thanksgiving episode playing on both TVs, members were able to socialize and relax for a couple of hours. This event was planned primarily by our Freshman Representatives, who were able to take initiative and plan an event for the first time on their own.

Audience: ASBME and AICHe Members



ASBME-AICHe Thanksgiving Dinner	November 21 <sup>st</sup> , 2021 5:00 – 8:00 PM	37 undergraduate attendees, 22 ASBME members (13.75%)	Cost: \$938.79
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## 8. Art Night

ASBME Social Chair, Matt, planned the first social night of the spring semester to be an art night, where members had the chance to get creative! Art supplies present included origami paper, watercolors, and markers. Minimal guidance allowed for members to create whatever they wished. Snacks were provided to allow people to chat and relax with each other while they created their art.

Audience: ASBME members looking to mingle with peers and friends



Art Night	February 3 <sup>rd</sup> , 2022 7:00 – 8:00 PM	10 undergraduate attendees (6.25%)	Cost: \$47.69
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## 9. Freshmen Game Night

Our three Freshman Representatives planned a game night for their peers to allow first-year BME students to get to know each other and new spring admits. Attendees played pictionary over Zoom and were able to meet and mingle with each other throughout the event.

Audience: Freshman and spring admit biomedical engineering students



Freshmen Game Night	February 7 <sup>th</sup> , 2022 6:00 – 7:00 PM	12 undergraduate attendees (7.5%)	Cost: N/A
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## 10. Valentine's Day Social

Prior to this event, a sign-up form was sent out to allow attendees to include information about what they liked. \$10 gift cards were sent out to all attendees, and matches were made by our Social Chair to allow people to purchase gifts for each other based on the responses of their chosen partner in the initial form. Pairs exchanged gifts on the day of the event, and competition-based games were played. The event was overall a success, allowing people to get into the Valentine's Day spirit.

Audience: ASBME members wanting to socialize and mingle with peers and friends



Valentine's Day Social	February 12 <sup>th</sup> , 2022 12:00 – 1:00 PM	13 undergraduate attendees (8.13%)	Cost: \$160
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## 11. GM 3.2: Bridge Building Competition

After a series of very informative panels, our third GM of the semester was a bridge building competition! Members took a break from midterm studies and came out to meet some fellow BMEs. They were assigned into teams to design and create a bridge from popsicle sticks and glue. Afterwards, we tested their model out with a luggage weight measurer, and the team whose bridge held the most weight won some gift cards.

Audience: ASBME members looking to have a fun time with other members



GM 3.2: Bridge Building Competition	March 1 <sup>st</sup> , 2022 7:00 – 8:00 PM	12 undergraduate attendees (7.5%)	Cost: \$50
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## 12. GM 5.2: Spikeball Tournament

For our 5th general meeting of the spring semester, ASBME members joined us on the McCarthy Quad to play spikeball. Three spikeball nets were set up for first-timers and intermediate players to compete against each other. Food and snacks were provided while members socialized amongst themselves.

Audience: ASBME members looking to have a fun time with other members





GM 5.2: Spikeball Tournament	March 22 <sup>nd</sup> , 2022 7:00 – 8:00 PM	20 undergraduate attendees (12.5%)	Cost: \$16.95
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### 13. ASBME X 3D4E Poker Night

Students from both ASBME and 3D4E, the USC 3D printing club, got to take a break from their studies to socialize with other engineers who they generally may not interact with. These students had the opportunity to relax and play poker in an environment friendly towards beginners. Students with more experience helped newer players learn the rules of the game. E-Board members from both clubs served as dealers for the tables as students socialized.

Audience: ASBME and 3D4E members looking to form more social connections with their peers in other clubs

ASBME X 3D4E Poker Night	April 2 <sup>nd</sup> , 2022 7:30 – 9:30 PM	14 undergraduate attendees (8.75%)	Cost: \$176.99
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### 14. ASBME X MEDesign Bowling

For this event, students from ASBME went bowling with students from MEDesign, a medical device team-based organization on campus. The bowling happened at Shatto 38 up the street from USC. After meeting on campus and driven to Shatto 38, students bowled for about 2 hours while socializing. The event revolved around having these two clubs that have a fair overlap in membership getting to know one another better, hopefully improving membership for both clubs.



Audience: Undergraduate students in ASBME and MEDesign

ASBME X MEDesign Bowling	April 15 <sup>th</sup> , 2022 7:30 – 9:30 PM	11 undergraduate attendees (6.88%)	Cost: \$150
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### 15. Project in a Box End of Year Social

Our Project in a Box team wanted to celebrate the end of the year after all of the hard work that they put into planning and teaching biomedical engineering lessons to local elementary and high school students. They put on a plethora of in person and virtual events this year and wanted to take the time to unwind with each other. They had a family style dinner at Northern Café and got boba at Pot of Cha, two iconic and popular locations near USC.



Audience: Project in a Box Volunteers

Project in a Box End of Year Social	April 17 <sup>th</sup> , 2022 7:30 – 9:30 PM	6 undergraduate attendees (3.75%)	Cost: \$97.94
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## 16. GM 7.2: Letter Writing

To prepare for a stressful finals season, ASBME hosted a relaxing meeting where we took the time to appreciate and affirm our peers in the BME community. We wrote letters to each other to open during finals season if we needed some words of encouragement, and snacks were provided for all attendees to socialize with their fellow BMEs. All attendees reported that they enjoyed having the opportunity to verbalize their appreciation for their peers. This was one of our more intimate GMs, and it was a wonderful way to end a hectic semester.

Audience: ASBME members interested in relaxing and socializing with peers at the end of the academic year

GM 7.2: Letter Writing	April 19 <sup>th</sup> , 2022 7:30 – 9:30 PM	12 undergraduate attendees (7.5%)	Cost: \$93.70
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## IIIB. Inter-Chapter Activities

*Collaboration is paramount in the field of engineering, and as such, retaining good relationships with fellow student chapters is very important. ASBME has hosted social and academic events with other local universities in Southern California, and we hope to work together to attend national and regional conferences as a coalition. We have been in communication with the BMES chapter at the University of California, Los Angeles for the past few years and had the opportunity to host a social event with them in the spring. We were please to host students from other universities across the nation at our annual Makeathon (which is discussed in further detail in the Societal Impact Activities section), including UC Irvine, Northeastern, and the University of Washington. Moving forward, we would like to continue to utilize virtual tools such as Zoom to collaborate with chapters beyond the Southern California region. Creating and maintaining relationships with fellow biomedical engineers is essential to entering the field post-graduation, and ASBME wants to give its members as many opportunities to network with students from other universities as possible.*

### 1. USC x UCLA Beach Volleyball Social

For this event, our chapter partnered with the BMES chapter at UCLA to promote closer bonding between biomedical engineers. On Saturday, April 16th, our ASBME members met UCLA students at Santa Monica beach where two teams were formed to play beach volleyball. While much of the focus was on the volleyball, students were also encouraged to simply talk and meet each other to learn more about what biomedical engineering programs at other schools look like. The teams were not segregated based on school; instead, BMES members from both USC and UCLA intermingled between teams, which allowed everyone to get to know each other better.



Audience: Students involved in biomedical engineering interested in meeting their peers at another school

USC x UCLA Beach Volleyball Social	April 16 <sup>th</sup> , 2022 10:30 AM-3:00 PM	3 ASBME attendees (1.875%)	Cost (to ASBME): N/A
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### IIIC. Outreach Activities

*ASBME actively recruits new members throughout the academic year. The resources that ASBME can offer its members are unparalleled by any other organization at the University of Southern California for BME students. ASBME ensures that every student has access to avenues for growth in professional and academic spheres. We extend this philosophy to our surrounding community, too, as demonstrated by our Project in a Box (PiaB) initiative. A team of ASBME members visited elementary school classrooms on a weekly basis to expose young students to biomedical engineering and encourage them to pursue STEM fields. Additionally, ASBME collaborated with various student organizations at USC to continue educating elementary, middle, and high school students about biomedical engineering and medicine.*

#### 1. Various Involvement Fairs

ASBME attended several involvement fairs to help prospective students get an idea of what the biomedical engineering program is like in the Viterbi School of Engineering and demonstrate what our organization does for its members. At each of these events, we included a poster as a visual aid to demonstrate the focuses of our organization and highlight some of our key initiatives and events. Interested students also had the opportunity to sign up for our mailing list to hear about our event programming.

Audience: Undergraduate students interested in biomedical engineering



USC Fall Involvement Fair	August 31 <sup>st</sup> , 2021	58 undergraduate students
Fall Viterbi Get Connected Fair	September 9 <sup>th</sup> , 2021	6 undergraduate students
Inter-Health Council (IHC) Involvement Fair	January 21 <sup>st</sup> , 2022	7 undergraduate students
Spring Viterbi Get Connected Fair	January 27 <sup>th</sup> , 2022	4 undergraduate students
USC Spring Involvement Fair	February 8 <sup>th</sup> , 2022	22 undergraduate students

#### 2. GM 0: Welcome!

Arjun, ASBME's President, highlighted our organization's missions and goals for the year. Executive Board members talked about the various events and programs they will be organizing during the semester. Following the main presentation, students had the opportunity to talk directly with E-Board members to learn more about how to get involved. The purpose of the event was to recruit new members of ASBME, especially those who were new to USC, and keep them up to date on all of the organization's events.



Audience: Students interested in learning more about ASBME

GM 0: Welcome!	August 31 <sup>st</sup> , 2021 7:00-8:00 PM	33 undergraduate attendees, 22 ASBME attendees (13.75%)	Cost: N/A
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### 3. Open E-Board Meetings

Our open E-Board meetings are an opportunity for individuals outside of our E-Board to learn more about what goes into planning events and programs for ASBME. Our first open E-Board meeting allowed students interested in the Freshman/Transfer Representative position to learn more about what being on ASBME's E-Board is like. Prior to submitting their applications for the position, students had the opportunity to introduce themselves to members of the current executive board. They saw how our meetings are run, from discussing past and upcoming events, to going over each board members' responsibilities. They also participated in some of our fun meeting traditions, like answering a "question of the week." Our second open E-Board meeting allowed students interested in the running for next year's Executive Board to be exposed to the innerworkings of our organization prior to submitting their applications.

Audience: Undergraduate students interested in applying for ASBME Executive Board positions

Open E-Board Meeting 1	September 7 <sup>th</sup> , 2021 8:00-9:00 PM	20 ASBME attendees (12.5%)	Cost: N/A
Open E-Board Meeting 2	March 8 <sup>th</sup> , 2022 8:00-9:00 PM	22 ASBME attendees (13.75%)	Cost: N/A

### 4. GM 0.2: Welcome!

ASBME's President, Arjun, spent the meeting going over the wide range of professional, academic, mentoring, social, and community outreach events that ASBME hosts throughout the year. During the course of the presentation, he also invited several other members of the E-Board to talk about their positions and announce their big upcoming events in the Spring, like Corporate Dinner and Makeathon. He also covered how to sign up for the club newsletter and how to become an official dues-paying member. At the end of the event, students had an opportunity to ask any E-Boarders questions about their responsibilities/events.



Audience: Undergraduate students interested in learning more about ASBME

GM 0.2: Welcome!	January 18 <sup>th</sup> , 2022 7:00-8:00 PM	39 undergraduate attendees, 29 ASBME attendees (18.13%)	Cost: N/A
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### 5. ASBME X Monument Crisis Center Volunteering

For the 2021-2022 school year, ASBME collaborated with Monument Crisis Center (MCC), a non-profit serving the East San Francisco Bay community. Through this collaboration, ASBME members were able to teach two virtual lessons on genetics to the youth programs at MCC. The first lesson was dedicated to general education about the concept of genetics, while the second lesson used an



online game called Pigeonetics to let the students experiment with genetics through breeding virtual pigeons with desired traits. ASBME students were in charge of planning and leading each lesson.

Audience: Elementary school students with an interest in biology and biomedical engineering

ASBME x Monument Crisis Center	November 3 <sup>rd</sup> and 10 <sup>th</sup> , 2021	4 undergraduate presenters (2.7%), 24 students at first session, 23 students at second session	Cost: N/A
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## 6. Project in a Box

Launched in 2016, PiaB is an outreach program geared toward visiting local 3rd to 6th grade classrooms to stimulate an interest in STEM and develop problem-solving skills at early academic stages. PiaB presents interactive projects and scenarios that prompt students to consider the engineering design process as it applies to the human body. This year, we taught lessons in two 5th grade classes at the 32nd Street USC Performing Arts Magnet, a K-12 school neighboring USC. We provided a series of five lessons dedicated to various topics listed below. Students are given some time to learn about the background information for a predetermined topic of interest; however, the majority of the lesson is spent with students interacting with physical materials and producing specific design requirements, as typical engineers do today. These one-time lessons last between 50-60 minutes, a timeframe that gives students time to gain interest in the project but also not distract them too much from their main academia.



Audience: Future biomedical engineers at neighboring elementary schools

Date	Lesson Title
December 3rd, 2021	Skeletal Hand Project (Anatomy of Hand)
February 18th, 2022	Prosthetic Hand Project
February 25th, 2022	Sounds All Around (Hearing)
March 4th, 2022	The Beat Goes On (Circulatory System)
March 25th, 2022	Build-a-Monster (DNA)
April 8th, 2022	Egg Drop (Design Competition)
<b>Total Cost</b>	<b>\$217.92</b>

## 7. IHC Hybrid High School Session

ASBME presented to about 10-15 high school students who are in the Medical Club at Hybrid High School. ASBME E-Board members in attendance gave an introduction to our club, what we do as a club, what biomedical engineering is, how biomedical engineering is related to medicine, how biomedical engineering can be used to help people, and our experiences in biomedical engineering. The main goal for this event was to get high school students interested and excited for a



potential career in STEM or medicine. The students seemed very interested in the presentation and had many questions for our presenters related to their college experiences and pursuing engineering after high school.

Audience: Hybrid High School students interested in biomedical engineering and medicine

IHC Hybrid High School Session	April 14 <sup>th</sup> , 2022 3:45-4:45 PM	2 ASBME attendees, 10-15 high school students (1.25%)	Cost: N/A
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### IIID. Mentoring Activities

*One of the hallmarks of ASBME's programming is our robust mentorship program, which focuses on pairing experienced upperclassmen BME students with underclassmen students who seek guidance, support, and friendship as they enter university. A large priority of ASBME when transitioning from a fully remote year to a fully in person year was to ensure that the mentorship program was strong and ready to support the large number of underclassmen students that could benefit from mentoring during the changing times. This year we had the most mentorship groups totaling 14 pairs and 5 trios. We held 7 mentorship events throughout the year and provided stipends to groups, allowing them to be reimbursed for any coffee chats or lunches. Events ranged from an ice cream social to allow mentors and mentees to meet each other, to gingerbread house decorating, pumpkin carving, and beyond. Each event was fun-filled and relaxed, allowing for natural bonding to occur and making everyone feel welcome. Many ASBME general members have reported that the mentorship program is one of their favorite parts of the organization, and the lasting mentor-mentee relationships that originate from this initiative is a testament to that.*

#### 1. Mentorship Ice Cream Social

The ASBME Ice Cream Social was our first mentorship event allowing potential mentees to get to know ASBME a little bit better and get to meet upperclassmen who could be their future mentors. ASBME purchased ice cream, cones, and toppings to encourage people to mingle with others but kept the event informal (without icebreakers and planned activities) to encourage natural conversation that wasn't possible on Zoom last year!



Audience: Potential mentors and mentees in ASBME's mentorship program

Mentorship Ice Cream Social	September 11 <sup>th</sup> , 2021 12:30-2:30 PM	14 undergraduate students (15%)	Cost: \$37.24
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#### 2. Mentorship Pairing Cookie Event

This event was held to allow the mentees and mentors to know who their respective pair was. The event had cookies with frosting and other decorations to provide a fun activity. While many icebreaker questions were prepared, they were unnecessary because so many pairs hit it off immediately. Overall, it was a great start to the mentorship program.

Audience: Mentors and mentees in ASBME's mentorship program

Mentorship Pairing Cookie Event	September 30 <sup>th</sup> , 2021 7:00-8:00 PM	21 undergraduate students (13.13%)	Cost: \$24.54
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#### 3. Mentorship Pumpkin Carving Competition

Mentors and mentees came on out in pairs to compete against other mentor-mentee pairs in a pumpkin carving competition! We gave a pumpkin to each pair and witnessed some amazing carvings take shape, from Hello Kitty to a Spooky OChem ghost and even an Among Us-themed pumpkin. It was a great event that allowed the mentors and mentees to get to know each other more and generally helped facilitate the bonds we are trying to make in the mentorship program. It also allowed many of us to get into the spirit for a spooky Halloween season!



Audience: Mentors and mentees in ASBME's mentorship program

Mentorship Pumpkin Carving Competition	October 23 <sup>rd</sup> , 2021 11:00 AM-12:00 PM	14 undergraduate attendees (8.75%)	Cost: \$34.21
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#### 4. Mentorship Gingerbread House Decorating

To pre-emptively celebrate the holidays and the end of the semester, mentorship pairs got together for the competition of the century: the ASBME gingerbread house decorating competition. Five pairs competed to determine not only who had the best decorating skills but also the best civil engineering skills. Building houses is hard, but luckily, no feelings were hurt as we all got in the holiday spirit while bonding with our pairs!



Audience: Mentors and mentees in ASBME's mentorship program

Mentorship Gingerbread House Decorating	December 2 <sup>nd</sup> , 2021 7:00-8:00 PM	10 undergraduate students (6.25%)	Cost: \$30
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#### 5. Mentorship Boba Outing at Pot of Cha

Right after the Makers and ASBME Python tutorial, mentors and mentees got together to get boba from the superior USC boba shop (aka Pot of Cha). Mentors and mentees were able to chat through classes and life and get to know some of the other people in the program. The event was a success and similar outings were proposed with other dessert spots around campus.



Audience: Mentors and mentees in ASBME's mentorship program

Mentorship Boba Outing at Pot of Cha	March 2 <sup>nd</sup> , 2022 8:00-9:00 PM	12 undergraduate students (7.50%)	Cost: \$22.92
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## 6. Mentorship End-of-Year Celebration

As not only our final mentorship event, but our final ASBME event for the semester, the mentorship social served as a way to celebrate the year coming to an end. With 17 ASBME members in attendance, it was a successful event! Insomnia Cookies ice cream sandwich kits were ordered for the celebration. Attendees were able to mix and match flavors and make their own ice cream sandwiches.

Audience: Mentors and mentees in ASBME's mentorship program



Mentorship End-of-Year Celebration	April 21 <sup>st</sup> , 2022 6:00-7:00 PM	17 undergraduate students (17.3%)	Cost: \$118.26
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### III.E. Industry or Professional Development Activities

*ASBME is committed to providing the necessary opportunities and resources to ensure its members' success in the biomedical industry. Despite some limitations brought about by the pandemic, we were still able to host a mix of in-person and online networking events and professional development workshops over the course of the year. Our signature annual networking events, Fall Networking Night and Corporate Dinner, provided an opportunity for over 100 student attendees to network with more than 20 corporate representatives from more than 10 different biomedical companies. During the rest of the year, we hosted events such as company information sessions, interview and resume-building workshops, and career panels. These events are intended to prepare students for the job-recruiting process and a future career in the biomedical industry.*

#### 1. Abbott Recruiting 101

This was a joint event with ASBME and MEDesign to prepare students before all of the upcoming company events. We covered basics such as networking, recruiting do's and don'ts, and some resources at your disposal to put your best foot forward! While this was very targeted towards underclassmen and transfers as we have two new classes on campus, attendees of all years benefitted from hearing more about Abbott and their upcoming events.



Audience: Underclassmen and transfer students new to the recruiting process at USC

Abbott Recruiting 101	September 16 <sup>th</sup> , 2021 7:00-8:00 PM	34 undergraduate attendees, 25 ASBME attendees (15.63%)	Cost: N/A
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#### 2. ASBME X MEDesign Medtronic Resume Workshop

In partnership with MEDesign, we held a resume workshop and info session with Medtronic. Six Medtronic reps, five of whom are USC alums, as well as three former Medtronic interns, spoke to attendees about their experience at Medtronic. Then, the Medtronic reps went over best practices for building a professional resume. For the final portion of the event, attendees were able to talk 1:1 with the Medtronic reps to network and have their resumes reviewed. This event showcases ASBME's strong connection with industry companies, which allows for USC students to gain incredible insight and support from professionals.



Audience: ASBME and MEDesign members prepping for recruiting season

ASBME X MEDesign Medtronic Resume Workshop	September 22 <sup>nd</sup> , 2021 7:00-8:00 PM	38 undergraduate attendees, 28 ASBME attendees (17.5%)	Cost: \$38.56
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### 3. GM 2: Corporate Cheat Sheets

In preparation for the Career Fair and Fall Networking Night, we held a corporate "cheat sheets" event to provide an overview of companies coming to each event. We also went over general tips for recruiting and networking. Additionally, we went over the general roles that exist within the BME industry. Students had the opportunity to ask our Corporate Chair questions afterward.



Audience: ASBME general members interested in securing internships at the USC Career Fair

Corporate Cheat Sheets	September 28 <sup>th</sup> , 2021 7:00-8:00 PM	42 undergraduate attendees, 12 ASBME attendees (26.25%)	Cost: N/A
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### 4. Fall Networking Night

ASBME's Fall Networking Night is one of two main networking nights for our club each year. At this event, industry representatives from various biomedical engineering companies such as Abbott, Edwards Lifesciences, and Medtronic, come to interact with our biomedical engineering students and talk to them about internship and job opportunities. This event is rotation based, which allows for a low representative to student ratio. In these rotations, our representatives sit at various tables while our students rotate to talk to as many companies as possible. Following the period of rotations, the official program ended, and we transitioned into open networking, where students were able to connect with representatives one-on-one. Overall, this event was an amazing opportunity for our students to create connections and learn more about what industry has to offer.



Audience: Students interested in networking with industry professionals for internship and job opportunities

Fall Networking Night	October 1 <sup>st</sup> , 2021 6:00 – 8:30 PM	66 undergraduate attendees (31.25%)	Cost: \$763.24
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### 5. Illumina Information Session

The Illumina Info Session provided students with the opportunity to learn more about a company that is at the forefront of biotech advancement, but one that most USC BME students are not exposed to frequently at career fairs. Two USC BME alumni who currently work for Illumina came back to the USC campus to give an informational presentation about the company. They also spoke to their specific career roles, and how the activities and classes they participated in during their undergraduate years prepared them for their new roles as



working professionals. At the end of the event, students had the opportunity to ask the alumni questions about the company and internship opportunities.

Audience: Undergraduate students looking to learn more about various engineering companies

Illumina Info Session	October 27 <sup>th</sup> , 2021 7:00-8:00 PM	16 undergraduate attendees, 12 ASBME attendees (7.5%)	Cost: N/A
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## 6. “I Didn’t Get an Internship – Now What?” Student Panel

This special event was created to reassure freshmen and sophomores who were unable to obtain internships from the USC fall career fair. In this event we held an event highlighting alternate summer options and potential recruiting opportunities in the spring. We started with an overview of several possibilities for what to do over the summer. Then we had a panel of five upperclassmen discuss what they did during their freshman and sophomore summers. Attendees were then able to ask panelists questions. Overall, the event was successful in guiding undergraduates in the right direction towards pursuing their passions.



Audience: Underclassmen looking for alternatives to fall recruitment at USC

“I Didn’t Get an Internship – Now What?” Student Panel	November 30 <sup>th</sup> , 2021 7:00-8:00 PM	16 undergraduate attendees (10%)	Cost: N/A
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## 7. Corporate Dinner

ASBME’s annual Corporate Dinner is designed to connect Viterbi’s bright and aspiring biomedical engineering undergraduate and graduate students with industry partners, so that they can receive more insight into various companies and potential internship/full-time opportunities. It is also a great opportunity for the biomedical devices and biotechnology industry to come together with USC’s phenomenal BME department and interact directly with future members of the field. Following a keynote speech from Medtronic Diabetes’ VP of Regulatory Science and Communications, Stacey Ellul, students were able to engage with corporate representatives in three rounds of group networking. After the official event concluded, students had the opportunity to meet one-on-one with reps during open networking. The event was extremely successful and one of the biggest hosted by a student organization in Viterbi’s community.

The Associated Students of  
Biomedical Engineering  
proudly present our  
**26th Annual  
Corporate Dinner**  
February 11th, 2022



Audience: Students interested in securing internship/full-time job opportunities

Corporate Dinner	February 11 <sup>th</sup> , 2022 6:00-9:00 PM	43 undergraduate attendees (26.88%)	Cost: N/A
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## 8. GM 2.2: Exploring Options Beyond Industry for BMEs

In this event, we hosted a panel of students interested in consulting, pre-med, pre-law, and PhD programs. These panelists discussed how they fulfilled the requirements for these professional programs as BME undergraduates. Panelists provided insight from their own experiences and highlighted how a BME degree enabled them to succeed in their fields of interest. Following the mediated panel discussion, panelists answered questions from the audience. The event was a great opportunity for students to gain insight into how they can use their BME degree in unconventional ways.

Audience: Students interested in professional degree programs

Professional Degree Student Panel	February 15 <sup>th</sup> , 2022 7:00-8:00 PM	14 undergraduate attendees (8.75%)	Cost: N/A
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## 9. BME in the Pharmaceutical Industry

ASBME hosted an event with the School of Pharmacy to help illustrate to biomedical engineering students how their skill set fits within the pharmaceutical industry. Two faculty members from the School of Pharmacy came to discuss the role of medical device development, as well as genetic and tissue engineering, in the development and testing of new drugs. They also discussed classes and minors offered by the School of Pharmacy that would be of interest to BME's. Students also had the opportunity to ask about the various events and opportunities put on by the school that may be relevant to them.



Audience: Biomedical engineering students interested in learning more about the pharmaceutical industry

BME in the Pharmaceutical Industry	March 3 <sup>rd</sup> , 2022 7:00-8:00 PM	10 undergraduate attendees, 9 ASBME attendees (5.63%)	Cost: N/A
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## 10. Professional Headshots

It may have been the end of the semester, but ASBMEs know that the corporate grind never stops! To help our members refresh their LinkedIn profiles, our very own Corporate Chair took some professional headshot photographs. We went to the most iconic photo location on campus, a.k.a. Mudd Hall in our very best business casual attire.



Members had the opportunity to take as many photos as they wanted.

Audience: ASBME members interested in updating their professional headshot photo

Professional Headshots	April 11 <sup>th</sup> , 2022 1:00-3:00 PM	3 undergraduate attendees (1.875%)	Cost: N/A
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### IIIF. Societal Impact Activities

*In addition to providing services for BME students at USC, ASBME is also dedicated to bettering the lives of those in our community. The first way we do this is through preparing our engineers to better serve those in need. Through our annual Makeathon, we give our students the opportunity to apply what they have learned in classes to solving real-world issues in the biomedical engineering world, which will better prepare them to create a larger impact in the future. The second way we do this is by directly helping those in our community. Through our Community Fridge initiative, we have dedicated our efforts to feeding members of our community. Being a biomedical engineer means so much more than excelling in the classroom; to ASBME, it means making a difference in our local community and even the world through conscious efforts.*

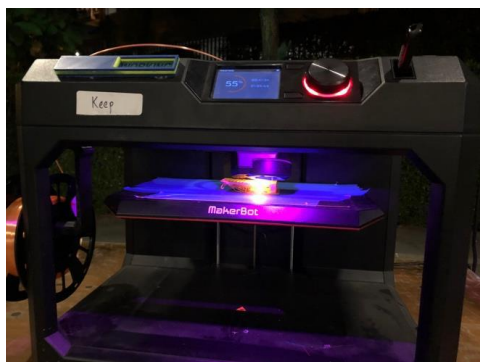
#### 1. ASBME's 7<sup>th</sup> Annual Makeathon Competition

The Makeathon is an undergraduate medical device design competition. Prior to Makeathon, there were limited opportunities outside of the classroom for USC students to create real-life, application-based projects related to the biomedical field. ASBME recognized this need and began hosting the



**ASBME MAKEATHON  
FEBRUARY 4-6, 2022**

Makeathon for the first time in February of 2016. Makeathon is, in essence, a hackathon for designers instead of coders; however, in recent years, there have been increased efforts to shift the focus of the event to more humanitarian efforts. Our competitors are encouraged to design their medical devices with the goal of improving the quality of life of patients everywhere. Over the course of a weekend, 11 teams of five to six students brainstormed and designed a device under material and functional constraints. In the past, the competition took place fully in-person over the course of a weekend. However, given the recent surge of COVID-19 cases at the time of the competition due to the Omicron variant, we ultimately decided to transition the competition to a hybrid format; our kickoff event, mentoring availability, and final presentations were all held online, but students had the option to come to campus on Saturday night and Sunday morning to fabricate their prototype.

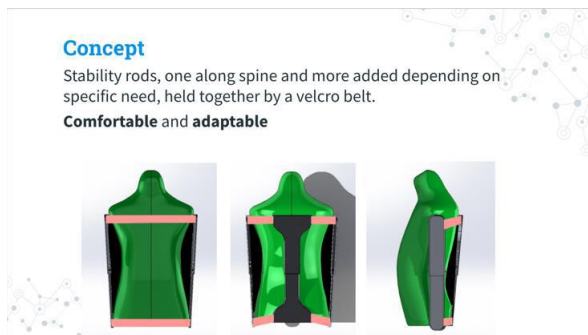


The teams utilized our BME Innovation Spaces to construct their designs from a variety of materials and methods, as well as 3D printers provided by a collaborating student organization, 3D4E. Furthermore, participants had the opportunity to access workshops and tutorial videos for Fusion360, Arduino, and other technical workshops hosted by ITP Professor Raymond Kim, 3D4E, and USCMakers. All teams then prepared a final presentation to be delivered to a panel of esteemed judges who determined the winners. Presentations covered design motivations, device

functionality, and impact on the field or on client needs. First, second, and third place awards were given, as well as an honorable mention. ASBME provided gift cards for competitors to purchase food throughout the course of the event.

We provided teams with a “Maker’s Toolkit” with background information on the pediatric cerebral palsy and final presentation guidelines. ASBME also supplied a range of resources through our

mentorship hours, in which alumni, industry, and graduate student mentors from across the nation met with students via Zoom in order to talk through design considerations and offer technical advice.



The challenge presented to this year's participants was to develop a static positioning device that aids in positioning and physical development for pediatric cerebral palsy patients. In keeping with last year's event, we decided to keep the prompt a bit broader than we have in past competitions. This year, students had to identify the specific age range within the pediatric cohort that they wanted to tailor their device towards, as well as the specific body part

and/or function they wanted to focus on. This year's winning team created a portable, modular seat that would grow and go with pediatric cerebral palsy patients. Our second-place winner created the "Power Belt," which allows for abduction and is adjustable for growth and a range of movements in patients. Other teams created iterations of back braces, stability rods, and so much more. Due to the hybrid nature of our event, this was the first year that we hosted competitors from many other institutions, including UC Irvine, Northeastern, and the University of Washington. Despite the diversity of designs and teams, all competitors were united in their desire to create a novel device that would improve the quality of life for patients.

Audience: Though biomedical engineering students were the target demographic, undergraduates from other fields were encouraged to participate.



7th Annual Makeathon	February 4 <sup>th</sup> -6 <sup>th</sup> , 2022	60 undergraduate attendees, 33 ASBME members (20.63%)	Cost: \$9,353.16
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## 2. Community Fridge Initiative



As students living in Los Angeles, it is our responsibility to take care of the community that has graciously opened its arms to us. L.A. has always housed one of the largest homeless populations in the nation, making food insecurity a major concern. 1 in 5 people in Los Angeles County have lived with food insecurity at the beginning of 2020; this proportion has unfortunately risen to 1 in 4 people

since the beginning of the COVID-19 pandemic. To combat this issue, ASBME partnered with the LA Community Fridge Program to help supply food and other basic necessities to those in need. This program has provided refrigerators across L.A. that citizens can benefit from — however, it's up to the community to ensure that these fridges remain stocked with supplies. As current circumstances have increased the demand for supplies, ASBME needs donations to help stock these fridges to assist the local community. Funds raised by our team will help to purchase items such as fresh produce, canned goods, pre-prepared meals, and hygiene products. Until now, we have raised \$1,511 to contribute to this initiative. This year, we have started taking biweekly trips to local stores to buy the supplies needed to stock the fridges. Our mission is to buy supplies periodically with the goal of keeping the fridges stocked for as long as we can.

Community Fridge Initiative	Ongoing Effort (beginning in 2021)	Attendance: N/A	Funds Raised: \$1,511
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### III.G. Other Initiatives and Activities

*Besides the aforementioned events, ASBME hosts a multitude of other events geared at exposing our diverse BME community to research and healthcare. Our annual BIOMED Research Symposium is one of our many flagship events in which undergraduate students are able to be exposed to all of the exciting research that is being conducted within the BME department on campus. We also hold many other research-related events, and even created a brand new event to allow students to get to know research professors in other departments in a more intimate setting. Quite a few of our members are also interested in attending medical school, so we hosted a general meeting in which a Princeton Review expert walked us through the medical school application timeline. This year, we also hosted a book club centered around the discussion of diversity, equity, and inclusion in healthcare, and learning about the biomedical engineer's role in combating historic structural inequalities. The breadth of our programming extends beyond the traditional understanding of what it means to be a biomedical engineer in the medical device industry, and we are proud to be able to provide the necessary resources for our members to discover what truly interests them.*

#### 1. BIOMED Research Symposium

The ASBME BIOMED Research Symposium was back in-person for the first time in 2 years. We had four PhD students from four different labs within BME each present a poster about their research and talk to our undergraduate attendees about their research experience as a graduate student. Following PhD student poster presentations and dinner, we had four professors share their research: Dr. D'Argenio, Dr. Mousavi, Dr. Liu, and Dr. Shen. It was a great opportunity for undergraduates to learn about the research that goes on in the USC BME department, network with professors, and learn tips and tricks on how to land research positions, right from the source. We hope to host more research and academia-based events for our ASBME members in the future.



Audience: Undergraduate BME students seeking research experiences on campus

BIOMED Research Symposium	September 10 <sup>th</sup> , 2021 5:30-8:00 PM	45 undergraduate attendees (25%)	Cost: \$572.11
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#### 2. GM 1: Research as a Biomedical Engineer

We hosted a panel of upperclassmen to discuss their experiences with research. Panelists discussed how they first got into research, the details of their projects, as well as their tips for how students can get into a lab. Following the planned discussion, students also had the opportunity to ask the panelists questions. The attendees enjoyed the ability to directly get advice from their peers regarding research at USC.



Audience: Biomedical engineering undergraduate students interested in research



GM 1: Research as a Biomedical Engineer	September 14 <sup>th</sup> , 2021 7:00-8:00 PM	45 undergraduate attendees, 35 ASBME attendees (21.88%)	Cost: \$33.27
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### 3. GM 3: 3D Printing

We introduced members to different 3D printing processes, how to use ASBME's Prusa 3D printer, and how to troubleshoot FDM 3D printers. We ended with a 3D printing demo where we printed a trefoil knot. Members present at the workshop have the permission to use the 3D printer with the assistance of our research chair. Students had the opportunity to ask questions about 3D printing in general after the demo was over.

Audience: ASBME members interested in 3D printing



GM 3: 3D Printing	October 12 <sup>th</sup> , 2021	27 undergraduate attendees (16.88%)	Cost: N/A
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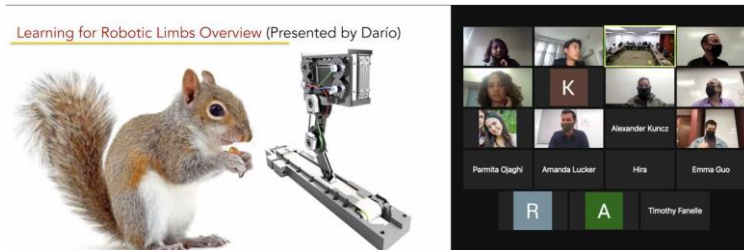
### 4. ASBME Lab Tours

Research is a big part of the undergraduate experience at USC, and our Research Chair, Winfield, was able to expose our members to many of the labs on campus throughout the course of the academic year. The first tour of the year took place in Dr. Eun Ji Chung's research lab, which focuses on developing nanomedicines to treat diseases. One of Dr. Chung's PhD students, Neil, showed us around the lab, talking about projects that the lab focuses on, and what he is personally working on. Neil also talked about the equipment around the lab and what it's used for, and let students look under a microscope to visualize cells that he was culturing. In the end, students asked lots of questions to Neil to better their chances of landing a research position on campus. The second lab tour took place in Dr. Maral



Mousavi's research lab, which develops low-cost diagnostics. One of Dr. Mousavi's PhD students, Victor, showed us around the lab, talking about projects that the lab focuses on, and what he is personally working on. Victor also talked about the equipment around the lab and what each is used for. The third lab exploration event was actually a sit-in for Dr. Valero-Cuevas' lab meeting, tailored for undergraduate students who are interested in hearing about specific research projects that go on at USC. Dr. Valero-Cuevas' research focuses on understanding the biomechanics,

neuromuscular control, and clinical rehabilitation of complex neuromuscular systems such as the human hand. ASBME students attended the lab meeting online via Zoom, and Dr. Valero-Cuevas had each of his PhD students give a quick description of the





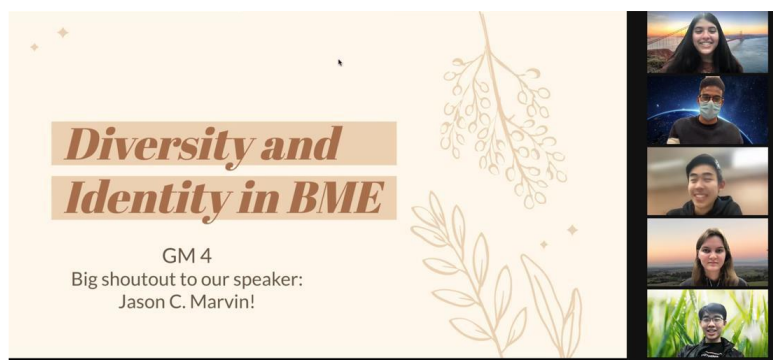
research project that they were working on. We also got to hear what the undergrads of Dr. Valero-Cuevas' lab were working on. The lab meeting concluded with ASBME attendees asking questions.

Audience: Undergraduate students looking to explore research options on campus

Chung Lab Tour	October 13 <sup>th</sup> , 2021 4:00-4:30 PM	9 undergraduate attendees, (5.63%)	Cost: N/A
MAD Lab Tour	November 10 <sup>th</sup> , 2021 3:00-3:30 PM	8 undergraduate attendees, (5%)	Cost: N/A
Valero Lab Meeting	December 2 <sup>nd</sup> , 2021 3:00-4:30 PM	9 undergraduate attendees, (5.63%)	Cost: N/A

## 5. GM 4: Diversity and Identity in BME

This was a mainly discussion-based General Meeting on Diversity and Identity in BME (held on Zoom). ASBME invited have a speaker to come in (Jason Marvin, a Ph.D. candidate at Cornell) to speak about his experiences and facilitate discussion. After hearing about Jason's experiences, followed by a short Q&A session with him, attendees were split up into breakout rooms and asked to respond to various prompts surrounding different issues of diversity and equity in biomedical engineering. At the end of the event, the entire group reconvened in order to share points of discussion in the breakout rooms and ask Jason any final questions.



Audience: BME majors regardless of year (or anyone interested in the BME field in general)

GM 4: Diversity and Identity in BME	November 2 <sup>nd</sup> , 2021	12 undergraduate attendees (7.5%)	Cost: N/A
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## 6. Professor Coffee Hour Chat with Dr. Zavaleta

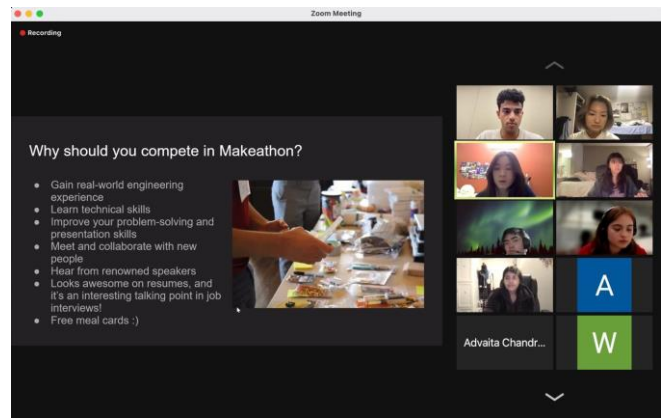
Every year, ASBME organizes a Professor Coffee Hour series, where professors are invited to grab coffee and treats with students. At this particular event, we invited Dr. Cristina Zavaleta to speak on her research experiences. Over the course of an hour, students were able to ask about Dr. Zavaleta's research interests, tips on how to get involved in research, and also got to learn fun aspects of her life! This was a great opportunity for students to learn more about their professors outside of the classroom. Students were also exposed to various career paths in biomedical engineering.

Audience: Students wanting to get to know their professors better

Professor Coffee Hour Chat with Dr. Zavaleta	November 18 <sup>th</sup> , 2021 6:00-9:00 PM	6 undergraduate attendees, 5 ASBME attendees (3.12%)	Cost: \$30
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## 7. Makeathon Info Session

Arjun & Sabrina (ASBME's President and Vice President) gave an overview of this year's Makeathon competition. Specifically, they discussed what this year's hybrid format would entail for potential competitors and highlighted the competition schedule. Attendees had an opportunity to ask Arjun and Sabrina any questions/concerns they had about the competition. Attendees were also provided with the opportunity to add their information to a contact sheet if they were interested in forming a team in advance of registration and still needed members.



Audience: Students interested in participating in the Makeathon

Makeathon Info Session	January 25 <sup>th</sup> , 2022	23 undergraduate attendees, 13 ASBME attendees (8.12%)	Cost: N/A
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## 8. GM 1.2: Seniors' Declassified BME Survival Guide

At the first GM of the spring semester, we had a panel of senior BME students give advice on how to navigate the USC BME experience. They answered questions about classes, internship opportunities, research programs, professors, and more. Underclassmen received invaluable insight into life as a BME major at USC. We provided both in-person and virtual formats for increased accessibility for students.

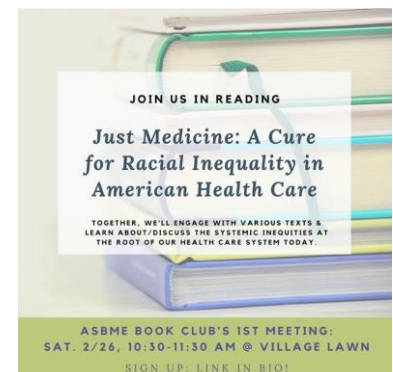


Audience: BME underclassmen (freshmen, sophomores, and transfers)

GM 1.2: Seniors' Declassified BME Survival Guide	February 2 <sup>nd</sup> , 2022	24 undergraduate attendees (14.77%)	Cost: N/A
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## 9. ASBME 2022 Book Club

As biomedical engineers, it is important that we are aware of how long-standing, systemic, and unjust health inequities have informed decades of interdisciplinary science, innovation, and scholarship. This semester, we started reading *Just Medicine: A Cure for Racial Inequality in American Health Care*, which was accessible to all students through the USC Libraries EBook system. As we learn more about the systems of power that are at play within our field, we can work to create meaningful change that will impact the lives of patients everywhere. Throughout the course of three separate meetings for our book club, we were able to have a semester of



meaningful reading that encouraged the members of our BME community to stay informed about their responsibility and the role they play in patient care.

Audience: ASBME undergraduate students

ASBME 2022 Book Club Meetings	February 26 <sup>th</sup> , 2022 March 25 <sup>th</sup> , 2022 April 1 <sup>st</sup> , 2022	3-5 undergraduate attendees (1-3%)	Cost: N/A
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## 10. Makers + ASBME Python and Data Science Workshop

In this event, students interested in learning technical skills attended a collaboration workshop with Makers and ASBME. In the workshop, Python and data science were taught. Students had the opportunity to first learn how to code in Python. Next, they were given problem sets where they were able to apply what they learned. Overall, it was a great event, and students were able to learn technical skills outside of the classroom that could be applicable to job and internship opportunities.



Audience: BME Students/Engineering Students who want exposure to technical skills

Makers + ASBME Python and Data Science Workshop	March 2 <sup>nd</sup> , 2022	17 undergraduate attendees, 10 ASBME attendees (6.25%)	Cost: N/A
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## 11. GM 4.2: Breaking Down Your Emphasis

In GM 4 of the spring semester, we went through each emphasis class-by-class so that students could understand what each one involves. We had seniors in each emphasis presenting so that students could ask questions. Students learned what inspired their emphasis choice, what experiences they have had, and how an emphasis could be beneficial to them.



Audience: BME underclassmen

GM 4.2: Breaking Down Your Emphasis	March 8 <sup>th</sup> , 2022	18 undergraduate attendees (11.25%)	Cost: N/A
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## 12. GM 6.2: Medical School Application Timeline

ASBME members interested in applying to medical school joined us for this GM, where we had a medical school application expert from the Princeton Review give a brief rundown on this seemingly intimidating process. Attendees were able to learn about all the different materials required for medical school, a

**Med School Applications**

Why do applicants that meet GPA and MCAT score still not get a seat at a medical school?

- Missing components
- Apply at wrong time
- Not packaged well

Source: <https://www.princetonreview.com/med-school-applications>

A small, square inset photograph in the top right corner of the graphic, showing a person with short dark hair, wearing a headset, likely a speaker or host.

general timeline to know when to start applying, and potential discounts on MCAT study materials. The event was held over Zoom.

Audience: BME students interested in applying to medical school

GM 6.2: Medical School Application Timeline	April 5 <sup>th</sup> , 2022	9 undergraduate attendees (5.625%)	Cost: N/A
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### 13. Professor Coffee Hour Chat with Dr. Chung

This event was a great way for BME students to get to know their faculty in a small, casual setting. Hosted in the Michelson Center for Convergent Biosciences, students were able to meet Dr. Chung. Dr. Chung is a recently tenured professor of BME at USC who runs the Chung Lab. Her work focuses on biomaterials and nanomedicine research. This event was a great opportunity for students to ask questions about research, academia, and professor life.

Audience: Students looking to get to know their professors outside of the classroom/research

Professor Coffee Hour Chat with Dr. Chung	April 6 <sup>th</sup> , 2022 3:30-4:30 PM	9 undergraduate attendees (5.625%)	Cost: \$30
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### 14. ASBME X AIChE Student-Faculty Dinner

The ASBME x AIChE Student-Faculty dinner was a collaboration event between ASBME (Associated Students of Biomedical Engineering) and AIChE (American Institute of Chemical Engineers). The goal of this event was to provide a casual space for BME and ChemE undergraduate students and professors to get to know one another better, which is difficult to do during normal student-professor interactions in class and in office hours. Students and faculty members were able to chat over a catered dinner. This was the first year this event took place, and we envision this event to expand in future years.



Audience: BME, ChemE, and engineering majors interested in making connections with professors

ASBME X AIChE Student-Faculty Dinner	April 8 <sup>th</sup> , 2022	16 undergraduate attendees, 10 ASBME attendees (6.25%)	Cost: \$445.96
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#### IV. National BMES Meeting

The 2021 Biomedical Engineering Society (BMES) conference provided an opportunity for students, professors, researchers, and industry professionals to come together and communicate recent advancements in the biomedical field. Like in previous years, ASBME members attended plenary sessions poster sessions, the graduate school fair, seminars, and professional development



workshops. To keep all our attendees engaged, we had everyone attend at least 3 events or sessions each day. The BMES conference was a fantastic opportunity for undergraduates to learn about the career paths of a biomedical engineer. It was also a chance to connect with leaders of BMES chapters at other universities and trailblazers in the biomedical field. In fact, we met Dr. Nancy Allbritton, the keynote presenter at this year's Makeathon, at the BMES conference. ASBME was able to showcase our chapter at the conference, and several of our Executive Board members had the pleasure of sharing more about our programming and initiatives with other conference attendees who came by our booth. Overall, the BMES conference provided opportunities for members to explore the field of BME and gain insight to help guide their future career and educational goals.

The attendees of the 2021 annual meeting are listed below:

##### BMES Conference Attendance

Name	Email
Advaita Chandramohan	archandr@usc.edu
Rachel Brockman	rkbrockm@usc.edu
Arjun Aron	arjunaro@usc.edu
Sabrina Sy	sdsy@usc.edu
Bari Noor	bnoor@usc.edu
Mehul Krishna	mehulkri@usc.edu
Gabriel Benitez	gabenite@usc.edu
Celine Vazquez	celineva@usc.edu
Nicolas Enriquez	naenriqu@usc.edu
Winfield Zhao	wtzhao@usc.edu
William Kristian Bostic	wbostic@usc.edu
Neha Yadav	nryadav@usc.edu
Christopher Liu	christzl@usc.edu
Giselle Lopez	gisselll@usc.edu
Grace True	gtrue@usc.edu

**Participation**

ASBME members were an engaged audience in nearly all the sessions offered at the conference. Two of our members were able to present their research at this year's conference in a poster format: William Kristian Bostic and Winfield Zhao. Many of our students attended presentations to learn more about the research being conducted at other institutions. In addition to the more academic and industry-focused events, we also had several students attend social events during the conference such as the Universal Studios Bash. At least 10 students are planning on representing ASBME at the conference next year.

**Student Chapter Booth**

In years past, we have aimed to showcase our ever-growing Project in a Box outreach program. To do this, we have brought physical materials and a poster to the conference to demonstrate the lesson plans' aims and purpose. This year, we were able to showcase our organization as a whole at our booth. We brought 3D-printed items that were actually printed by our chapter's 3D printer, stickers, buttons, and other merchandise that was representative of our chapter. We were able to discuss our chapter's programming and events with conference attendees who stopped by our booth and share more about the undergraduate BME experience at USC.

## V. Future Direction

### Transition Plan/Goal Achievement Strategy

In order for a large and well-established student-run organization to continue its success despite having to change leadership in such a short amount of time, a well-defined and thorough transition plan must be made. ASBME continues its effective transition plan founded in 1985 to continue its success and progress. The transition plan is as follows:

1. Elections: ASBME elections occur near the end of the Spring semester. The President and the Vice President are elected through a direct democratic vote by the club's current members. The remaining positions are also voted upon, and the top two nominees are interviewed and chosen by the newly elected President and Vice President.
2. Transition Meetings: Soon after the elections, the President and Vice President ensure that each of the transition meetings occur promptly. In the transition meetings, the previous executive board member meets with the newly elected executive board member in the presence of either the President or Vice President to discuss the responsibilities of the Executive Board position as well as to review the transition document.

Transition documents are passed on throughout the years and constantly updated by the new board members. This document is extremely important in the transition between board members because it includes duties, timelines, reflections, and tips specific for each new executive board member. An example of a past transition document is attached below.

#### ASBME Community Chair Edited: 3/31/2017

##### Outgoing Officer Contact Info (most recent at the top)

Luann Raposo  
925-628-8295  
lraposo@usc.edu

Amanda Leon  
408-690-1459  
amandais@usc.edu

Kevin Xu  
408-368-0345  
kxu428@gmail.com

Hey there,  
Congratulations on becoming an ASBME board member! Community Chair is such a fun and rewarding position and we hope you enjoy it as much as we have. Below is some useful information for planning events as well as your responsibilities in leading Project in a Box (PiB):

**Community Chair email:**  
asbme.community@gmail.com

• Use this email for all teacher and PiB committee communication as well as any event planning correspondences. Don't forget to change the email signature so it doesn't say the previous officer's name!

##### Responsibilities

- Plan regular community events (suggested below)
- Create google doc sign-ups for events to monitor attendance
- Don't forget the necessary waivers (for Viterbi and if the event requires one)
- Project in a Box!!

##### Project in a Box

##### Responsibilities:

- Contact teachers to schedule classroom visits
- Send reminders to teachers at least a week before scheduled visit
- Lead Project in a Box committee
  - Determine a consistent committee meeting place and time (I suggest creating a Doodle poll or whenisgood to gauge when your committee members are available to determine a permanent meeting time)
  - Prepare necessary agenda and materials for meetings, which will typically occur every week depending on what you need to get done

- Hold committee members responsible for classroom visit attendance and meeting attendance
- Manage the PiB Facebook & Slack groups by uploading classroom visit photos and reminding members of meetings and classroom visits.

##### General Tips and Tricks:

- **Keep a google spreadsheet** of all teacher contact info, when they contacted you, and the date/ time of the scheduled visit. You can use the previous spreadsheet as a template or create your own.
- **Try to schedule visits on FRIDAYS** around 1-2 PM. This is important because Fridays are the most likely day that committee members are available and elementary schools are usually released around 3PM. If you try to schedule lessons for other days, you risk not having enough committee members in attendance.
  - If you have classes on Fridays then that may be a problem. See Implement Project Leads below for a potential solution.
- **Keep committee meetings efficient!** Have a set agenda and goal that you want to accomplish for the week. If there is nothing that needs to be done, great! Cancel the meeting.
- **READ THE LESSON PLANS AND KNOW THEM WELL.** Unless you have some particularly outgoing committee members, you will likely be leading classroom visits for at least the first couple lessons. Be comfortable and have fun with them! Practice speaking confidently and energetically.
- If you want to add another lesson, go for it! Be sure to delegate work to committee members and help them feel like they are contributing!
- **Implement project leads.** Train some dedicated committee members to be able to lead classroom visits. You can delegate specific sections to specific people, or have individuals lead the entire lesson. BE SURE NOT TO ASSUME THEY KNOW THE LESSONS AND WILL PERFORM WELL IN FRONT OF A CLASS. Practice with them and have them run through the lesson with you as if they were in front of a class. This is a great way to get dedicated committee members even more involved and distribute more responsibility.

##### Timeline

##### Summer

- Begin contacting teachers early
  - Have JEP coordinator (DJ Kast) send out mass email announcement to her teacher contacts. You can view the email history in the asbme.community email to see what previous outreach emails have looked like.
  - Teachers will (hopefully) begin responding to you expressing interest in the program. Try to schedule tentative dates and times with them so you can keep a running schedule. Let them know that they can switch dates if needed, but our schedule will fill up quickly!
  - Use the asbme community email-- look at my previous emails to get ideas on how to respond to teachers and plug PiB
  - This is when you should create a spreadsheet in which you document teacher contact info and scheduled dates. It will prevent a lot of future confusion!
  - Plan the first classroom visit about a month into school, as you will need the time to teach the committee members the lesson plans

Fall Semester	<ul style="list-style-type: none"><li>• Determine the best time and location to hold committee meetings<ul style="list-style-type: none"><li>◦ At ASBME's first GM, pass around a PiB committee interest sheet so you can begin contacting ppl.</li><li>◦ You'll likely want to start meetings a week after ASBME's first GM; email members who are interested and inform them of the first meeting</li><li>◦ If you have low attendance, then you can use Doodle or whenisgood forms to find out when would be the best time for meetings</li></ul></li><li>• Begin a facebook group and Slack channel to communicate with committee members.</li><li>• Keep track of classroom visits<ul style="list-style-type: none"><li>◦ Always email teachers a week before the visit to confirm the time and ask for visiting procedures for their school</li><li>◦ Create Facebook polls to determine how many committee members can make it to the classroom visits (1 week before visit as well)</li><li>◦ Prepare lesson materials at the meeting before the visit</li></ul></li></ul>
Winter Break	<ul style="list-style-type: none"><li>• Start scheduling classroom visits again! Follow the same procedure as the previous semester. (see Summer above)</li></ul>
Spring Semester	<ul style="list-style-type: none"><li>• Follow the same procedure as Fall semester for classroom visits (create a NEW TAB on your planning google spreadsheet to separate the two semesters)</li><li>• You can try to reach out to ASBME members to see if more want to join the committee, but otherwise stick with the people that you have!</li><li>• Also, expect to help with the ASBME end-of-the-year binder for the Project in a Box portion. Make sure that you have all pertinent information from each classroom visit, including:<ul style="list-style-type: none"><li>◦ School, teacher, grade, number of students</li><li>◦ Which lesson you did</li><li>◦ Committee members in attendance</li><li>◦ Date/ time of visit</li></ul></li></ul>

##### Planning Community events

##### Ideas for Generating Involvement

- **FOOD.** Bring food. Apply for funding for food. ADVERTISE food. College students are always looking for their next meal.
- **CAREER HELP.** If you can somehow have a leader at the organization give a little talk about what they do/how they do it (I'm thinking more medical volunteering here), people will be more willing to try out their potential future careers through a service event.
- **COMMUNICATION.** Post notifications EVERYWHERE and WAY ahead of schedule. The ASBME newsletter will not cut it. Use the Facebook group, tell your friends, post in the Viterbi bulletin, do whatever it takes to get the word out EARLY so people know what's going down.

3. Spring Retreat: Following the elections and transition meetings, the Spring Retreat is a chance for the new executive board to meet and socialize through a variety of ice-breakers and discussion. After a light opening, the new board discusses the future of ASBME, its goals, and its main mode of organization: the ASBME Google Drive.

The ASBME Google Drive is the backbone of communication and information storage for the ASBME executive board. It includes a master calendar that contains all events for the coming year, transition documents, account passwords, pre- and post-event forms, position-specific information, as well as general documents for the board as a whole. It ensures the seamless transfer of information from year to year.

4. Executive Board Summer Check-Ins: Throughout the summer, the President individually contacts the new board members to ensure they understand their responsibilities. As ASBME aims to start each year strong, the President maintains direct communication with each board member so that any questions are answered in a timely manner and everyone is prepared for the coming year.

## Goals Achieved

Prior to the start of the 2021-2022 academic year, ASBME leadership outlined several goals for the organization. Confirmed by student and faculty feedback as well as the Event of the Year award given by the Klein Institute of Undergraduate Engineering Life, ASBME is proud to have accomplished its past goals of building an engaging outreach program, supplementing the BME curriculum with technical and professional development workshops, and initiating meaningful partnerships with other organizations. Our primary goal was to **foster a sense of community within the undergraduate BME community and rebuild out social networks following a completely virtual year from 2020-2021**. This also included interacting with other BMES student chapters and learning more about the biomedical engineering experience at other institutions. We were definitely able to accomplish this goal through the most ambitious calendar of social events that our organization has seen to date. We hosted a total of 16 social events that catered to a diverse range of interests. Additionally, we were able to revive our mentorship program, and our Mentorship Chair created a record number of pairings/groups. We were able to create many mentorship events that will now be traditions within ASBME, such as our cookie decorating and pumpkin carving events. Lastly, our beach volleyball outing with UCLA's BMES chapter allowed us to create lasting connections with members from their chapter, and we have both expressed interest in meeting each other again in the coming academic year.

This year, we also hoped to **integrate diversity, equity, and inclusion (DEI) programming in our organization**. As biomedical engineers, we are responsible for so much of the technology that gets implemented in the clinical setting and has a lasting impact on the quality of life of patients everywhere. ASBME routinely publicized health-related DEI programming at USC and encouraged all of our members to attend. We included a running list of academic resources and scholarships for underrepresented minorities in engineering in each of our weekly newsletters. For the first time this year, we also organized a DEI Book Club that allowed our members to discuss pertinent and important issues in healthcare. We only hope to expand this slate of programs in the future.

Traditionally, three major companies have been known to recruit BME students from USC at our campus career fairs: Medtronic, Edwards Lifesciences, and Abbott. However, many members have reported to us that they wish that they had more exposure to other biomedical companies, especially since internships and full-time offers at these three companies are very competitive to obtain. Thus, we hoped to **expand our corporate outreach beyond the Big Three companies**, and we were able to do just that through much of our corporate programming. This year, we hosted an information session with Illumina, which is an engineering company that has never actively recruited at USC before. We also invited representatives from many other companies to our Fall Networking Night and Corporate Dinner, such as Boston Scientific, GE Healthcare, Gilead Sciences, Microvention, and many more. Members in



attendance at our corporate and professional events have stated that ASBME programming has played an integral role in enabling them to obtain positions at their desired companies. Expanding our corporate outreach has only created more opportunities for our members and opened their eyes to the diverse field of biomedical engineering.

Furthermore, we hoped to **increase exposure to careers beyond traditional engineering industry roles**. To accomplish this, we planned much of our programming alongside the research labs within our BME department in order to show undergraduates that academia and research are viable career options for BMEs after graduation. Our first in-person event of the year, our annual BIOMED Research Symposium, allowed undergraduate students to hear from PhD candidates on campus, as well as four of our esteemed faculty. Our Research Chair this year hosted three lab tours with three separate biomedical engineering labs on campus, each showcasing very different aspects of the discipline. We also created a brand-new event, our Faculty-Student Dinner, in which we invited faculty members from other departments, including the Chemistry and Chemical Engineering departments, in order to expand our members' opportunities to get involved in research on campus. One of our general meetings was a student panel in which we showcased senior BME students who were pursuing options beyond industry, such as grad school, medical school, and law school. This exposed our members to the broad range of applications of biomedical engineering outside of the medical device design industry. Lastly, we also collaborated with the USC School of Pharmacy for the first time in our organization's history to educate out members on degree options for BME students in the pharmacy school, as well as how BMEs are involved in the pharmaceutical industry. Overall, we had our most diverse professional development programming this year, which we are definitely proud of.

Our final goal this year was to **expand our community outreach to serve as a more consistent STEM-outreach presence in the South-Central Los Angeles community**. Our Project in a Box initiative was able to accomplish this through utilizing both online and in-person resources to reach as many students as possible. Although several COVID-19 variants during the course of the academic year caused in-person lessons at local elementary schools to be halted, that did not stop our members from teaching lessons online. We even were able to expand our reach to the Bay Area by collaborating with the Monument Crisis Center. This year, we also extended our programming to include high school students interested in biomedical engineering. ASBME stayed involved in USC's Inter-Heath Council (IHC), which regularly hosts sessions with local high schools. Several of our E-Board members were able to deliver a presentation to a group of high school students who were curious about how BME was related to medicine. At the end of the presentation, the students had many questions, and it seemed that we definitely sparked interest in some future engineers.

ASBME is proud of all the goals that we were able to achieve this year. Our distinctive goals covered a wide range of programming and pushed us to host so many events to cater to the diverse interest of our student and greater Los Angeles community.

## **Chapter/Leadership Expectations for the Upcoming Academic Year**

For this upcoming school year, we have determined three major areas in which we would like to improve: **increasing integration of diversity, equity, and inclusion (DEI) in our existing events, as well as the creation of new programming, expanding exposure to the diverse career options for BME students outside of the biomedical device industry, and furthering social and mentorship programming to continue to build our supportive undergraduate student community.**

This year, as we began to promote and host diversity, inclusion, and equity (DEI) centered events, we noticed that attendance was quite low at many of these programs. We strongly believe that an engineering degree is incomplete without a thorough understanding of the implications of one's skills and experience on the lives of others, as well as ways that one can use their education to dismantle systemic injustices within our society. As we continue to create more meaningful programs and expand upon our existing ones, such as our DEI Book Club, we also hope to attract more members to these events. One way to accomplish this would be to begin **hosting these events as early as possible in the academic year, when students are the most eager to attend club functions**. Additionally, we hope to **collaborate with other student organizations on campus to expand our impact on the Los Angeles Community**, such as the USC Student Coalition Against Labor Exploitation. Lastly, we hope to continue our fundraising efforts beyond our current Community Fridges initiatives and also **focus on biomedical engineering-focused initiatives**, such as supplying local schools with STEM supplies and resources and utilizing our 3D printer and BME makerspace to fabricate necessary items for vulnerable populations.

Similarly, the uncertainty brought about by the pandemic further highlighted the importance of ASBME as a professional organization. And while our thorough slate of corporate programming will remain a big focus of our organization, we also want to make sure that students appreciate the **full range of career possibilities available to them**. As such, we will pay special attention to **hosting career programming beyond just industry-related topics, such as academia and research**. We plan on hosting more **research dinner events**, similar to the BIOMED Research Symposium and our Student-Faculty Dinner, to allow our members to learn more about the research conducted on campus in a less formal setting, and also potentially showcase the research they themselves have conducted. We also plan on **organizing more lab tours** to spark curiosity regarding academia. As we have already started to do this year, we want to **collaborate with more of USC's professional schools, such as the Keck School of Medicine, the USC School of Pharmacy, USC Gould Law School, and more**.

One of our major takeaways from running ASBME during the 2021-2022 year was the significance of friendship and community during trying times. We placed a large focus on providing students with opportunities to interact with their peers outside of class settings, and as a result, hosted one of the most ambitious and robust slates of social programming in ASBME's history. While we had a great amount of momentum from our programming this year, we also recognize that we will need to **expand on our approach to community-building as we continue to adjust to campus life**. There are several ways in which we hope to accomplish this. One idea we have is to **host certain social events with more regularity on a set schedule**. Having events with this consistency will ensure that members always feel that they can relax with friends at ASBME events, which will strengthen our sense of community. We also plan on having **more collaborative events with other student organizations** to foster our members' relationships with students within the engineering school and the broader university in general. Many of our collaborative events this year involved other engineering organizations, but we hope to be able to host programming with non-engineering clubs as well.

ASBME is very excited to implement these new changes as we maintain our commitment to serving the undergraduate BME student body to the best of our ability. We hope to help students find their place in the biomedical field and provide a positive and supportive community for all BME students during their time at USC.