



*UC Berkeley Chapter
2019-2020*

Our chapter is organized into five committees -- Academic, Corporate, Design, Fall Reception, and Outreach -- along with general membership, all led by our Officer Core. As a whole, we strive to serve the undergraduate population at UC Berkeley by providing resources and community to anyone who is interested in bioengineering or biotech. Each committee is focused on a specific aspect of bioengineering at Berkeley and is responsible for organizing events for the general membership and developing its members. The Academic and Corporate committees introduce and provide opportunities in academia and industry, respectively. The Design committee teaches its members useful skills in software and provides a space for members to work on their own design projects. The Outreach committee serves the greater Berkeley community through alumni outreach, volunteering, and STEM outreach efforts, as well as manages the undergraduate Mentor and Mentee Program and Public Relations subcommittee. The Fall Reception committee organizes and executes our annual Fall Reception event, which is a formal dinner event providing undergraduates with the opportunity to network with professors, graduate students, alumni, and industry representatives. Furthermore, we hold General Meetings and General Member socials in order to promote club-wide social and professional opportunities.

Dear National BMES,

During the 2019-2020 academic year, the Biomedical Engineering Society of UC Berkeley drove innovation across all of its domain areas and demonstrated adaptation to a variety of difficult circumstances. Our chapter expanded upon its past events in creative ways, while also honoring our rich history. From our central purpose of providing a community for any undergraduates interested in the field of biotechnology, we pushed to develop new ways to engage with and enrich the lives of our members professionally, academically, and socially.

Over the past two semesters, much of our growth came from a stronger emphasis on professional development. In the fall semester, we held two major networking events - our annual Industry Dinner and Fall Reception. These dinner events provided invaluable opportunities for students to meet professors and industry professionals, giving members the opportunity to gain insight into career interests and make connections for the future. Moreover, our chapter increased the variety of professional events, starting with our longstanding professor luncheons and laboratory/industry tours and expanding to include resume and graphic design workshops.

From an outreach and mentoring perspective, our chapter also found great success. In spirit of remaining active members of our local community, our chapter participated in more local volunteering events than ever before, volunteering at the city half marathon, the Oakland Food Bank, and San Francisco Exploratorium, to name a few localities. In terms of mentorship, we revamped our undergraduate Mentor & Mentee program to improve member engagement, as well as partnered with a Bay Area high school for a series of panels exposing high school students to bioengineering in a university context. Notably, our chapter also launched a brand-new public relations team to improve publicity and to provide an interface for interaction with the community at large.

During the COVID-19 pandemic, our chapter responded by swiftly adapting our operations to protect the campus community. Instead of in-person events, we transitioned to online discussions and panels, such as alumni coffee chats and industry info-sessions via video chat. Additionally, we sought to maintain the social aspect of our chapter through a number of Zoom socials and activities. While this proved a significant challenge, our chapter rose to the occasion and maintained an impactful presence.

Despite our growth this year, there are always areas for improvement. We have taken steps this year to identify the needs of students, and we will continue this process next year of re-evaluating and fine-tuning events to meet these needs. Our chapter plans to continually work to ensure an inclusive, accessible, welcoming environment for members to foster strong relationships. The significant impact of COVID-19 has also made it clear that we will need to achieve a greater level of resiliency and innovate to continue being a resource to our members. We are optimistic about the future, and look forward to another fantastic year.

Sincerely,



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ADMINISTRATIVE REPORT

Abstract

Each semester, our chapter's general member and committee member populations grow in various ways. In particular this past year, our chapter diversity increased significantly; we saw increased interest from non-bionengineering majors, and even from non-engineering majors. Our students hailed from departments such as Molecular & Cell Biology, Chemical Engineering, Electrical Engineering & Computer Sciences, and of course, Bioengineering, to name a few. Notably, from a leadership perspective, we were pleased to announce the newly created General Member chair position. This position facilitated greater integration with the general member community and resulted in numerous events to encourage more cohesion within the chapter as a whole.

For the 2020-2021 school year, we aim to expand our chapter's reach to recruit more students and interest them in biomedical engineering. Given the circumstances brought about by the global COVID-19 pandemic, our leadership team has been and will continue to work hard to ensure that this goal can be made a reality. Additionally, we added the new Public Relations Chair officer position for the upcoming academic year. We are optimistic that this position will allow us to better address the our critical needs of communication, retention, and unity as a chapter. Our leadership team is continually striving to create a more inclusive community, and we hope to build on our work accomplished last year.

Membership Breakdown

Our organization is primarily meant to serve the undergraduates of UC Berkeley, although we often collaborate with graduate students for events. Our membership is broken down into general membership and committee membership, with approximately 130 committee members and an additional 81 general members.

In the interest of keeping the club as accessible as possible, anyone interested in bioengineering/biotech may sign up for general membership and be accepted on a rolling basis, gaining access to our Slack workspace and the community and opportunities specific to that platform, as well as priority access to registration for larger dinner events. In exchange, we ask that members attend at least two events a semester.

For committee members, we held a formal application period at the beginning of the fall semester for a yearlong commitment, with chairs selecting members for their respective committees. This year, we also held a spring enrollment period, with applications made available exclusively to general members. Members are selected based on a holistic evaluation, taking into consideration how the member has engaged with the club in the past and how they may benefit from being part of a committee. Once the committee is formed, members are expected to attend weekly meetings, as well as any events that their committee organizes.

National Membership

The bioengineering department sponsors up to 10 national memberships a year for any interested club members. We announced the availability of these memberships over our club email list and announcements page.

1. Geena Kim
2. Anthony Chau
3. Elizabeth Wang
4. Annabel Yau
5. James Lo
6. Luis Fernando Ayala
7. Jasmine Gupta
8. Bernardus Edgar William
9. Zishuai Chou
10. Andrea Palomo

General Meetings

General meetings are used to as an opportunity to bring the entire club together, as well as for members to hear from each other. Historically, they dropped off in the spring semester, which is a point of growth we would like to improve on in the coming year.

9/12/19	General Meeting #1 <i>Introduce prospective members to the chapter and leadership team, welcome returning members back, announce upcoming events and important dates.</i>	98 undergraduates	\$300
10/30/19	General Meeting #2 <i>Student speakers discussed summer opportunities in industry and academia, provide gathering space for chapter members and food</i>	27 undergraduates	\$134.37

Executive Board



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Officer Roles

President: The President is nominally in charge of overseeing all the operations of BMES. The President must represent the organization in the community to groups including but not limited to: prospective members, other engineering organizations, and the Bioengineering department. The President shall facilitate officer meetings and set the agenda for each meeting. Additionally, the President shall actively organize the general meetings, attend BMES events, and oversee the general welfare of the organization.

Co-Vice President: The Co-Vice Presidents (Co-VPs) oversee internal and external aspects of BMES. Co-VPs oversee internal aspects of BMES including retreats and maintain a good inter-committee relationship to keep the organization united as a whole while facilitating collaboration between officers and committees. The Co-VPs report on the effects of changes to the club and may suggest new changes or abolish previous changes. Additionally, Co-VPs oversee external aspects of BMES including intersocietal events by serving as the official liaison to intersocietal collaborations and other regulatory parties BMES falls under. Overall, the Co-VPs assist officers in any case that includes outside participants and sponsors. Lastly, Co-VPs will lead Welcome Week to recruit new members at the beginning of Fall Semester. When necessary, the Co-VPs may assist the President.

Treasurer: The Treasurer oversees all of BMES's finances. During the summer, the Treasurer should require a budget proposal from each officer and advise on the budgeting process. At the beginning of the academic year, the Treasurer creates a yearly budget to share with the department. At the end of the fiscal year, if applicable, the Treasurer is responsible for filing for taxes with the IRS and ensuring BMES follows all legal proceedings. Throughout the semester, the Treasurer updates the BMES accounts on a weekly basis and handles reimbursements to individuals. The Treasurer regularly attends Engineering Student Council (ESC) finance committee meetings to petition for more funds. The Treasurer keeps detailed records on how much each event cost and what the money went towards to facilitate future budgeting.

Secretary: The Secretary's primary duty is to record and inform the members of the organization about upcoming activities. At each officer meeting, the Secretary will record minutes of the decisions made and action items assigned. The Secretary also oversees BMES member and officer listservs and emails out a weekly digest to inform members of upcoming events. The secretary also works with the appropriate officers to develop and maintain BMES's contact database including the alumni network and corporate contacts.

General Member Chair: The General Member Chair oversees the general member population within BMES (members who are interested in attending and participating in BMES events, regardless of if they are in the committee system). Primary responsibilities of this position include: planning general meetings which service the needs of the greater BioE community, creating dedicated events and workshops for general members, and integrating general members into the BMES community. This position will coordinate closely with Exec to continue to develop this position.

Academic Chairs: The Academic Chairs oversee the Academic Committee and ensures that the committee provides appropriate resources to facilitate the academic success of students. These resources may include events such as professor panels or mentorship programs. The Academic Chair(s) works closely with the appropriate officers when coordinating events to

ensure the quality of BMES academic relationships are maintained. The Academic Chairs also maintains the relationship between BMES and Bioengineering graduate students.

Corporate Chairs: The Corporate Chairs oversees the Corporate Committee and ensures that the committee provides the appropriate resources to facilitate the professional success of students. These resources may include company info-sessions or professional etiquette seminars. The Corporate Chairs works closely with the appropriate officers when coordinating events to ensure the quality of BMES corporate relationships are maintained.

Design Chairs: The Design Chairs oversee the Design Committee and ensures that the committee facilitates a stimulating and creative environment. Responsibilities include creating and overseeing subcommittees that take on different projects, such as, but are not limited to: apparel, yearbook, website, and photography/videography. Design Chairs are strongly encouraged to teach or to find resources for their subcommittee in the field of design software (ie. Adobe Creative Suite, Autodesk software, etc) that will further committee members' skillsets and help them on various subcommittee tasks.

Fall Reception Chairs: Fall Reception Chairs oversee the Fall Reception Committee to ensure BMES's annual Fall Reception comes to fruition. Fall Reception Chairs must have previously worked deeply with Fall Reception, someone with two years of experience on FR or a previous officer is preferred. The position will run through the fall semester, with an option to stay on the officer core through the spring to fulfill their officer duties.

Outreach Chairs: The Outreach Chairs oversee the Outreach Committee to coordinate methods with which BMES can connect with the community. The Outreach Chairs shall organize projects such as community service events and alumni events. The Outreach Chairs works closely with the appropriate officers when coordinating alumni events to ensure the quality of BMES's external relationships are maintained.

Officer Meetings

The Officer Core meets once a week, with meetings covering updates on each committee's activities, addressing any new issues or questions, and holding an in-depth discussion of a weekly Officer Meeting topic.

DATE	OM TOPIC
8/29/19	Welcome Week preparation, general meeting planning, start-of-semester logistics
9/9/19	Discussion on meeting attendance, member retention, committee leading best practices
9/16/19	Meet & Greet Event preparation, committee membership application finalization
9/23/19	Debrief committee membership deliberations
9/30/19	Set-up Mentor & Mentee program and reviewed expectations
10/7/19	Continued discussion of Mentor & Mentee pairings and program changes

10/14/19	Discussion on BMES branding, preparation for Industry Dinner event
10/24/19	Recap Industry Dinner event, general meeting expectations
11/4/19	Recap events (Fall Committee Retreat, Berkeley Project, Fall Course Advice Workshop), etc.
11/11/19	Discussion on publicity and event saturation
11/18/19	Run-through of logistics for Fall Reception
12/2/19	End-of-semester planning, Fall Reception recap, conversation on dinner event tabling
1/27/20	Calendaring new events, start-of-semester logistics
2/3/20	Spring Committee Retreat debrief
2/10/20	Continued Spring Committee Retreat debrief, brainstormed areas for improvement
2/17/20	Reevaluate and reassess legacy events for future sustainability and relevance
2/24/20	Discussion regarding member retention and engagement (meeting open to all members)
3/2/20	Review of officer elections protocols and procedures
3/12/20	Gather feedback on officer elections process, Cal Day event planning
3/16/20	Introduction for newly elected officers, initial CDR proposal
3/30/20	Continued revaluation and reassessment of legacy events
4/6/20	Re-defined chapter vision, performed need-finding exercises
4/13/20	Begin long-term planning for upcoming year's logistics
4/20/20	Continue need-finding exercises and prioritize chapter-wide needs to be addressed
4/27/20	Final meeting, end-of-year wrap-up, mentorship and transitions for new officers

**does not include individual meetings between officers for further planning outside of officer meetings*

TREASURY REPORT

Abstract

Our chapter receives two types of funds, program and miscellaneous. Program funds are designated for operational and transportation expenses, while miscellaneous funds may be used more freely. The Treasurer oversees transactions and handles all reimbursements. Leftover funds from previous years that rolled over into this year allowed us to stay net positive, despite the fact that this year our expenditures exceeded our income. However, these can be accounted for by the increased transportation costs from previous years and our Sustainability Initiative (see *Other Activities*). With better transportation management, we are expected to be back to normal next year.

Income

Program Funds

Engineering Student Council (ESC) - Initial Program Allocation	\$1000
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Miscellaneous Funds

ESC - Initial Miscellaneous Allocation	\$700
ESC - Engineering T-shirt Distribution	\$300
Fundraising - Fall Reception Ticket Sales	\$650
Fundraising - Fall Reception Raffle Tickets	\$240
Fundraising - Valentine Grams	\$200
Fundraising - Apply-a-Thon Food Sales	\$82
Fundraising - Industry Dinner Ticket Sales	\$1083
Student Opportunity Fund	\$1,036.07

Total	\$5,291.07
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Expenditures

Program Funds

Welcome Week	\$112.36
Meet & Greet	\$76.50
Industry Dinner	\$600.15
Fall Reception	\$369.01
Mentor & Mentee	\$12.02
Fall Committee Retreat	\$14.30
Fundraising - Valentine Grams	\$37.47
Fundraising - Apply-a-Thon	\$29.80
Officer Morale	\$13.29
Sustainability Initiative	\$409.78

Miscellaneous Funds

General Meeting #1	\$300
First Committee Meeting	\$174.63
Fall Alumni Mixer	\$79.18
Industry Dinner	\$1,361.33
Fall Reception	\$1,301.06
General Meeting #2	\$134.37
Fall Committee Retreat	\$125.41
Graduate Student Panel	\$35.62
Medical Student Panel	\$47.20
Fall Course Advice Worksho	\$75.76
Professor Luncheon - Marriott	\$5.40
Fundraising - Apply-a-Thon	\$82.04
Engineering in Medicine	\$11.09

Total

\$5,407.77

CHAPTER ACTIVITIES

Our chapter activities this past year kicked off with Welcome Week in early September - a series of four consecutive daily events to introduce students to the chapter in a fun way. Next, we held our first general meeting and met many prospective members. Soon after, we began accepting committee applications for our five committees, beginning our weekly committee meetings promptly. Our annual Industry Dinner was the highlight of October, while our Halloween-themed second general meeting allowed for a moment of reconnection between members. November was busy yet rewarding, with Fall Committee Retreat, Fall Alumni Mixer, and Fall Reception - our biggest networking event of the year - all occurring in short succession. In December, we wrapped up our first semester with the Fall Committee Banquet and various festive socials.

In late January, our chapter embarked on our annual Spring Committee Retreat at Lake Tahoe for a much-needed escape from a hectic life of academics. February saw a series of Mentor & Mentee program socials, along with our Apply-A-Thon event for job-seekers. Our chapter hosted graduate students at the Grad Student Dinner and organized a course advice workshop in March before transitioning to online activities due to the COVID-19 pandemic. To finish off the year, we created virtual versions of our events in April and May, such as virtual professor luncheons, coffee chats, and company info-sessions. Although this school year was unlike any other, our chapter was nonetheless pleased with how we were able to adapt.



Activity Breakdown

Social

Inter-Chapter

Mentoring

Outreach

Industry / Professional

Development

Other



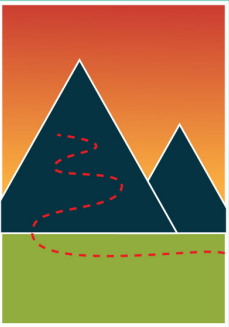
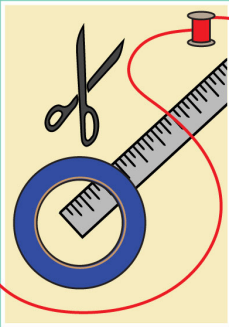
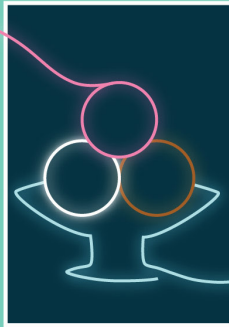
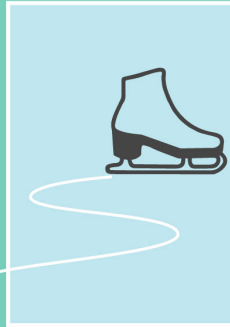
SOCIAL ACTIVITIES

Cal BMES socials strive to build community both within campus and beyond, be it between old and new members, mentorship pairs, different committees, general members, or other chapters. In hosting various social events, we hope to provide a supportive and engaging platform in which those passionate about the bioengineering community can encourage and learn from each other. Opportunities such as the mentorship program, "donut dates," and 2-on-2s between officers and committee members are ways in which members can either give the knowledge they've acquired from their personal journeys in exploring bioengineering or gain a point of contact to which major or interest-related questions might be directed. Additionally, socials are not limited strictly to bioengineering but also serve as opportunities for members to bond over other interests they may have, be it nature, movies, food, sports, etc. Such inclusivity allows for member bonding to occur in both professional and social environments, allowing members to meet new people, develop lasting friendships, gain new perspectives, get advice, and explore bioengineering with others – regardless of major or level of club involvement. Socials also serve to celebrate the collective members' efforts at the end of the semester, reflecting on memorable highlights and accomplishments.

Welcome Week

Welcome Week is an event hosted the first full week of school to give students a chance to meet new people, reconnect with friends, and start the year off strong. Activities included a sunset hike, a team-building engineering challenge, a trip to a famous ice cream shop, and an arcade social.

— BMES —
welcome week

			
— 9/3 — FIRE TRAILS HIKE CLARK KERR CIRCLE, 6:30PM	— 9/4 — ENGINEERING CHALLENGE STANLEY HALL, 6:30PM	— 9/5 — FENTON'S CHALLENGE CENTER ST + OXFORD ST, 6:30PM	— 9/6 — ICE SKATING CENTER ST + OXFORD ST, 6:30PM

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Social Activities

9/3/19	Fire Trails Hike	Berkeley Fire Trails	~40 undergraduates	\$0
9/4/19	Engineering Challenge <i>A scavenger hunt for materials and a bridge-building contest with found items</i>	Various buildings in the engineering circle	~30 undergraduates	\$20
9/5/19	Fenton's Creamery <i>Dinner and dessert at Fenton's Creamery (as featured in UP) and watching new officers take on the Fenton's Challenge</i>	Fenton's Creamery	~40 undergraduates	\$0
9/6/19	PLANK Arcade and Bowling <i>*modified from the original event due to last-minute change in rink availability</i>	PLANK Oakland	~30 undergraduates	\$0

Committee Socials

Each of the committees, in addition to serving their function, serves as a smaller space in which members can develop relationships. Committees hold committee-specific socials in order to provide a relaxed social space for this development to take place.

9/3/19	First Committee Meeting <i>The first committee meeting collected all committee members together as an introduction to the committee system and to their respective groups.</i>	HP Auditorium	~100 undergraduates
9/24/19	Fall Reception - Dinner	Downtown Berkeley	15 undergraduates
10/4/19	Corporate - Boba Trip	RareTea Berkeley	10 undergraduates
10/6/19	Design - Pizza + Frozen Yogurt	La Val's + Menchie's	15 undergraduates
10/20/19	Outreach - Lunch	Chengdu Style	20 undergraduates
10/25/19	Outreach - Karaoke	Jaguar Karaoke	15 undergraduates
	Corporate - Industry Dinner Afterparty	Member Apartment	20 undergraduates
10/26/19	Academic - Pizza + Board Games	Member Apartment	10 undergraduates
11/1/19	Corporate - Oakland First Friday	Oakland First Friday	7 undergraduates
11/9/19	Fall Reception - Board Games	Member Apartment	10 undergraduates
11/24/19	Design/Corporate - Dinner	Downtown Berkeley	15 undergraduates
12/9/19	Academic - <i>The Grinch</i> viewing + White Elephant	Member Apartment	15 undergraduates

Social Activities

2-on-2s

Each committee hosted small meetings between the two co-chairs and two members of the respective committee. This enabled the members to provide feedback on the co-chairs' progress and structure of leadership, describe their goals and thoughts on committee meetings and events, and build rapport with the officers.

General Member Socials

Throughout the school year, our BMES chapter actively engaged our general members in the BMES community through General Member socials (GM socials), which were open to all members of BMES.

9/14/19	Meet & Greet	HMMB Lobby	40 undergraduates	\$76.50
10/12/19	<i>How to Train Your Dragon</i> Viewing	Cory Hall	11 undergraduates	\$0
11/11/19	Barbeque	Member Apartment	30-40 undergraduates	\$128
2/15/20	<i>Sonic the Hedgehog</i> Viewing	Downtown Berkeley	6 undergraduates	\$0

BioE Cup

This year we had the chance to help host the newly-minted BioE cup, a friendly competition between the bioengineering related clubs on campus. The competition was a joint effort between our chapter, the Bioengineering Honor Society, Bioprinting at UC Berkeley, and International Society for Pharmacoeconomics UC Berkeley Chapter. Members of each club joined to compete in sets of four, playing in sports, trivia games, and other activities in a new way to promote cross-organization interaction within the major.

12/8/19	Quiz Day	Soda Hall	8 BMES Members	\$0 (paid for
12/9/19	Sports Day	Hearst Gym	25 total participants from all clubs	by BioEHS)

Committee Banquet

At the end of the Fall 2019 semester, BMES held a Fall Committee Banquet at the local Chengdu Style Restaurant to celebrate and recognize all the BMES committee members for their hard work during the semester. BMES committee members and officers were invited to attend the banquet. At this business-casual dinner event, the attendees were able to meet and socialize within and across different committees

12/10/19	Committee Banquet	Chengdu Style Restaurant	~35 undergraduate committee members	\$0, paid for by members
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Mentor & Mentee Socials

As mentioned in the Mentoring section of this report, our Mentor-Mentee (M&M) program was designed with the goal of fostering lasting connections between members of the BioE community. The M&M-specific socials were meant to allow participants to connect with potential mentors and mentees and make/reconnect with friends in the program.

10/1/19	Speed Dating	Wurster Field	10 undergraduates
10/4/19	Board Games	Barrows Hall	35 undergraduates
2/5/20	Dinner + Catch-up	Downtown Berkeley	20 undergraduates

Retreats

One of the most important parts of our community building is the retreats we hold. The destinations vary, but from a local park that's further away from campus to the peaks of South Lake Tahoe they offer our members a chance to escape from the hectic campus life, if only for a weekend.

11/2/19	Fall Committee Retreat	Codornices Park	~40 undergraduate committee members	\$139.71
1/31/20-2/2/20	Spring Committee Retreat	South Lake Tahoe	46 undergraduate committee members	\$0, paid for by members
4/25/20	Corporate Committee Retreat	San Francisco	~15 undergraduates	N/A

**cancelled due to COVID-19*



INTER-CHAPTER ACTIVITIES

This school year, our BMES chapter's inter-chapter activities primarily consisted of collaborations with Leigh High School's BMES chapter. Through our partnership with this Bay Area high school (located in San Jose), we led several online undergraduate student panels with the purpose of educating the high school students about the different facets of bioengineering. During spring semester, in addition to being in the midst of talks to continue the student panels for Leigh High School's BMES chapter, we were also in discussions to plan a cross-chapter social with the Stanford's BMES chapter. However, these plans to collaborate with Stanford were halted due to the COVID-19 situation. In future school years, we plan to expand our collaboration other chapters. Our chapter believes that inter-chapter activities are very valuable in helping to elevate the BMES experience for everyone involved, and we will continue to extend our correspondence with various local chapters, including chapters at both the high school and collegiate levels.

Leigh High School BMES

The Outreach Committee's mentorship of Leigh High School students aimed to grow high school student interest in bioengineering by giving them the opportunity to learn more about the bioengineering field through a series of undergraduate student panels, with each panel centered on one of the following four Bioengineering concentrations offered at UC Berkeley: Biomedical Devices, Cell and Tissue Engineering, Biomedical Imaging, and Synthetic and Computational Biology. There was also interest in having panels regarding other engineering majors, like mechanical engineering and electrical engineering. Due to the effects of COVID-19 on spring semester events, only the introductory meeting and first two panel could be arranged. However, these panels will continue into the next school year.

10/23/19	Introduction Panel	4 undergraduates, ~10 high school students	\$0
11/14/19	Biomedical Devices Panel	3 undergraduates, ~10 high school students	\$0
4/16/20	Tissue Engineering Panel	3 undergraduates, ~10 high school students	\$0

Stanford University BMES

We were able to reach out to the Stanford BMES Chapter this year and briefly discussed hosting a joint event. Unfortunately, these plans were disrupted by the COVID-19 virus outbreak. However, we hope to maintain contact with this chapter and reach out to others in the Bay Area in the coming year.

OUTREACH ACTIVITIES

This year, Cal BMES maintained an impactful Outreach Committee dedicated to serving the community as well as fostering lasting connections among bioengineering students. We continued our participation in the Berkeley Project (a campus-wide volunteering initiative), beautified the Exploratorium in San Francisco, assisted at the Alameda County Community Food Bank, and unpacked medals at the Berkeley Half Marathon. We also continued our relationship with the Society of Women Engineers by collaborating with them on multiple events aimed towards high school outreach. In maintaining a presence in the community, we stay grounded as engineers and as people. We value the work that we put into maintaining community relations, and as such make sure to put emphasis on it in our actions.

Berkeley Project

Every semester our organization is one of the many that participates in the Berkeley Project. The Berkeley Project is a massive volunteering undertaking that sends hundreds of volunteers into various sites in the city in an effort to serve the broader Berkeley community, and our chapter signs up to serve at a location together at each event. Participating provides us an opportunity to step out of the bubble that is our school and engage with the community that surrounds us, grounding us in reality as we continue to pursue our academic careers.

11/2/19	Fall Berkeley Project	Ohlone Dog Park	~40 undergraduates
4/12/20	Spring Berkeley Project		

**cancelled due to COVID-19 outbreak*

Local Volunteering

In addition to participating in larger campus volunteering activities, our Outreach committee organized smaller projects with various localities.

9/28/19	Exploratorium <i>Beautified the outside of the Exploratorium, followed by a committee lunch. This event set a precedent for upcoming experiences and served as a fun bonding experience for new and old members.</i>	San Francisco Exploratorium	14 undergraduates
11/16/19	Berkeley Half Marathon <i>Set-up Medal and Finish Line stations for the Annual Berkeley Half Marathon</i>	Downtown Berkeley	13 undergraduates

Outreach Activities

2/8/20

Alameda County Community Food Bank

Assisted the Alameda County Community Food Bank by packaging food into smaller bags to make them easily distributable to different shelters and reach those who need it..

Alameda County Community Food Bank

11 undergraduates

BMES X SWE - Mini University

The Outreach Committee planned and led engaging engineering-related activities at the UC Berkeley SWE Mini University Program during both the fall and spring semesters. Mini University is a one-day event hosted by SWE during which underserved high school students come to UC Berkeley to learn about engineering through hands-on engineering activities, lab tours, professional speakers, and student panels.

9/28/19	Team Bridge Building	14 undergraduates	Cost reimbursed by SWE
11/16/19	Candy DNA Modeling	13 undergraduates	Cost reimbursed by SWE

BMES X SWE - High School Engineering Program

During the spring semester, our BMES chapter planned to have a collaboration with the UC Berkeley SWE High School Engineering Program. SWE's High School Engineering Program is a 10-week program for high schoolers during which UC Berkeley students have the chance to become mentors for Bay Area high school students during each week's engineering lesson. Because the semester was moved online when this event was scheduled to happen, we were unable to host a hands-on activity; instead, we gave a presentation about bioengineering and the opportunities available for students pursuing bioengineering. Afterwards, we held a Q&A session for students to ask us questions about our major, engineering, and the college in general.

3/14/20	High School Engineering Program	2 undergraduates, 28 high school students	Cost reimbursed by SWE
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MENTORING ACTIVITIES

Mentoring is an essential component of our chapter here at UC Berkeley. As members progress through their undergraduate years, many are eager to pass on information to newer generations. Over the years, we have tried to integrate mentorship at all levels of our community. In addition to our structured programs, our chapter has seen countless organic mentorship relationships thrive outside of our official initiatives. We are proud of the social climate that our members have created and continue to sustain each year.

Mentor & Mentee Program

This year, the M&M program was reinvented to foster more lasting connections. To this end, mentors and mentees were grouped into cohorts that regularly met and did fun activities and challenges (e.g. cooking a 3-course meal together or having a picnic). This year there were four cohorts, with about 9 pairs each, which were revealed during a special event called Reveal Day. Over the course of the semester, cohorts participated in a competition where each pair received points for meeting with each other; at the end, a winner would be declared based on who accumulated the most points. Another new implementation this year was the creation of a lineage system where new mentees would be added to their mentors' existing lineage and continue to extend the family as more mentees joined. The purpose of this system was to promote interconnectedness and improve the longevity of connections to the organization. Overall, this program flourished this year and paved the way to building a stronger network within the BioE community.

Fall 2019	Reveal Day	73 undergraduate participants	\$12.02
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Big Bear

The Academic committee hosts the Big Bear program for its committee members, which matches each committee member to a graduate student mentor that provides guidance and advice in terms of graduate school paths, admissions, and lab research.

Fall 2019 - Spring 2020	~10 participants	\$0
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Course Advice Workshop

With each semester comes a course advice workshop which allows new BMES and BioE students to connect to older members and gain advice from them about what classes to take and how they personally selected their concentration and path. Snacks were provided during the event.

10/29/19	Fall Course Advice Workshop	Bechtel Hall	~25 undergraduates	\$75.76
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INDUSTRIAL / PROFESSIONAL DEVELOPMENT ACTIVITIES

BMES offers a host of industry and professional development activities to build up valuable skills for our members and connect them to industry, academic, and mentorship resources and opportunities. For industry, members are provided with resume and LinkedIn building workshops. They are also invited to form connections, gain advice, and learn about job opportunities from industry professionals at the Industry Dinner. For academic resources, BMES hosted several graduate and medical students to share their experiences in panels for members to explore different fields. Professor luncheons were also organized to help students feel more connected, learn about exciting topics, and have the opportunity to land research positions. For both industry and academic resources, company and lab tours were held, so students could see firsthand how working in industry or academia was like. Finally, Fall Reception was held to connect undergraduates with each other, professors, and alumni to share insightful expertise and advice. Many of our committees are dedicated to further professional development, whether that is in industry, academia, or alumni connections.

Design Committee

The Design Committee gathers and guides the creatively curious by providing lectures and workshops on design software (ie. Adobe Creative Suite, Autodesk software, etc), workshop skills (ie. 3D printing and laser cutting), photography/videography, and website building. The goal is to offer a variety of skills to help students build engineering portfolios and experiment with personal branding. With the theme of "engagement," it allows students to work interactively in groups on design and engineering projects covering graphics, medical devices, websites, club apparels, yearbook, and PR (posters, flyers). The Design Committee strives to provide a space that bridges the engineering knowledge from class, problem solving skills, and creativity, which will prepare them for future projects and careers.

Consulting

The Corporate Committee created the Consulting subcommittee, which partnered with Potrero Medical to develop a machine learning and image processing algorithm. Subcommittee members researched relevant information, visited Potrero's laboratories, and brainstormed experiment setups. Members developed valuable connections and earned insightful experience collaborating with a Bay Area start-up.

Industrial / Professional Development Activities

Industry Dinner

Industry Dinner was a formal networking dinner for undergraduates to have the opportunity to connect with representatives from local biotechnology companies, such as Bayer, Aduro, and Genentech. Students had the chance to network with each other and industry representatives in a mixer beforehand, and then were matched with two industry representatives according to their interests. Afterwards, there were several table rotations for students to meet with other representatives, gaining valuable advice and exposure to industry. Afterwards, many students took opportunities to connect with representatives for job and internship opportunities.

10/21/19 Pauley Ballroom ~145 undergraduates \$1961.48
40 representatives

Fall Reception

Fall Reception is one of the chapter's largest annual networking events where undergraduate students, graduate students, alumni, and professors are invited to celebrate the field of bioengineering. The event is centered around a formal dinner with a speech given by a keynote speaker—generally a UC Berkeley professor.

Fall Reception is arranged by a dedicated committee, which is responsible for all aspects of the planning/set-up process. The event itself is hosted and run by the BMES officer core, under the direction of the Fall Reception Committee chairs.

11/25/19 Anna Head Alumnae Hall 115 undergraduates \$1,670.07
28 representatives



Graduate/Medical Student Panels

The Academic committee organizes a set of 2 panels of graduate students and medical students from UCSF-UC Berkeley joint graduate program and UCSF Medical School. The panels allow undergraduates to gain a deeper understanding of what each of these pathways entails and the chance to interact and discuss personal inquiries with these students.

11/7/19	Graduate School Panel	4 representatives, 15 undergraduates	\$35.62
11/18/19	Medical School Panel	5 representatives, 6 undergraduates	\$47.20

Alumni Mixer

During the Fall 2019 semester, the Outreach Committee coordinated and held an Alumni Mixer at Willard Park. Cal BMES alumni came to support and give advice to current BMES members about coursework, internships, and careers in the biomedical field. Activities included icebreakers, such as "Two Truths and a Lie," and socializing over lunch.

11/9/19	Willard Park	13 undergraduates, 7 alumni	\$110
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Apply-a-Thon

The Corporate Committee hosted an Apply-a-thon, where bioengineering students were invited to join a 6-hour internship and research application session, with food provided. Valuable advice from expert upperclassmen was given to students as a presentation and 1-on-1. Attendees were taught the ins and outs of applying, different companies, strategies, LinkedIn Setup, and 1-on-1 resume coaching.

2/22/20	Bechtel Hall	25 undergraduates	\$111.84
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Resume / LinkedIn Workshop

The Corporate Committee coordinated with the Outreach Committee and Design Committee to hold a resume / LinkedIn workshop exclusively for the committee members. The two Corporate co-chairs held presentations on each committee about resume building tips and LinkedIn profile, followed by critiquing an example resume. The goal was to enhance and prepare committee members' resumes for internship application season.

Infosessions

A few times a year our chapter has the opportunity to host an infosession with various companies or institutes. The infosessions offer the opportunity to connect with representatives of various organizations that can help students paint a clearer picture of what life after graduation may look like for them.

11/21/19	Keck Graduate Institute	8 undergraduates	\$0
4/22/20	Aerotek (Virtual)	12 undergraduates	\$0

Industrial / Professional Development Activities

Industry/Lab Tours

We held a formal networking dinner for undergraduates to have the opportunity to connect with representatives from local biotechnology companies, such as Bayer, Aduro, and Genentech. Students had the chance to network with each other and industry representatives in a mixer beforehand, and then were matched with two industry representatives according to their interests. Afterwards, there were several table rotations for students to meet with other representatives, gaining valuable advice and exposure to industry. Afterwards, many students took opportunities to connect with representatives for job and internship opportunities.

11/8/19	Abbott Tour <i>General tour of Abbott Cardiovascular. Familiarize attendees with the inner workings of a company, witness a device demo, and talk with a variety of professionals working at the company.</i>	Menlo Park, CA	14 undergraduates	\$0
11/18/19	Conboy Lab Tour <i>Gave students the opportunity to explore the Conboy Lab, which focuses on human aging and aims to find bioengineering solutions to rejuvenate aging cells.</i>	Stanley Hall	12 undergraduates	\$0
1/24/20	Dueber Lab Tour <i>Attendees had the opportunity to talk to researchers in the lab and learn about their operations. The Dueber Lab develops strategies for introducing designable, modular control over living cells and generating technologies for improving engineered metabolic pathway efficiency and directing flux.</i>	Energy Biosciences Building	9 undergraduates	\$0

Professor Luncheons

A long-standing series of events, the professor luncheons are co-hosted by BMES and the Bioengineering Honor Society. The program allows undergraduates to talk with a Berkeley bioengineering professor more personally over lunch or coffee to gain insight and advice about academic, professional, or personal development. Events are limited to small groups, allowing for a more personalized experience. The two organizations alternate organizing the event and paying for the professor's meal.

10/29/19	Gerard Marriott	8 undergraduates	\$10
11/15/19	Phillip B. Messersmith	4 undergraduates	\$0 (BioEHS)
11/20/19	Terry D. Johnson	8 undergraduates	\$10
12/2/19	John C. Anderson	3 undergraduates	\$0 (BioEHS)
4/23/20	Phillip B. Messersmith	5 undergraduates	\$0 (BioEHS)
4/27/20	Sanjay Kumar	5 undergraduates	\$0

Alumni Coffee Chats

The Outreach Committee planned a short series of Alumni Coffee Chats, during which Cal BMES Alumni would come or call-in to talk to current BMES members about their journey in bioengineering and give advice about careers in bioengineering. These chats transitioned to an online format due to the COVID-19 outbreak.

4/25/20	Lucy Hu	10 undergraduates	\$0
5/2/20	Jerry Xiao	9 undergraduates	\$0

Grad Student Coffee Chats

In response to the COVID-19 outbreak, the Academic Committee converted one of its graduate student events to a series of virtual coffee chats extending into the summer. Each graduate student centered their chat on a topic of their choice, ranging from graduate school applications to gap years to start-up culture and more.

5/8/20	Hannah Schmitz	9 undergraduates	\$0
5/20/20	Cameron Kato	10 undergraduates	\$0
5/29/20	Kevin Fan	8 undergraduates	\$0
6/1/20	Luis Valencia	9 undergraduates	\$0
6/3/20	Kristine Tan	N/A	\$0
6/10/20	Pierce Hadley	N/A	\$0
6/18/20	Kate Crawford	N/A	\$0

OTHER ACTIVITIES

Slack

One of the biggest changes we've made recently was switching to Slack as the main platform for our club communications. We maintained our presence on other platforms, but switching to Slack gave us a more robust set of tools for informal community building. We utilized the channel feature and bots to create various niches in which people could hold conversations at any point in time, in the hopes that a unifying platform would create a space where people feel they can easily reach out to one another. We list some of our most active channels and their purposes below.

#gen-donut

This channel includes the donut-be-alone bot, which takes all of the channel's participants and randomly places them into pairs weekly, with the idea being that each pairing will meet up during the week. It provides an opportunity for members to meet new people, as is often a struggle in such a large club.

#gen-random

Exactly what it sounds like, this channel is host to memes, alerts for free food, news about other campus events, and whatever members feel like talking about.

#gen-movienights

Members often coordinate going to see movies together in this channel, or will ask for recommendations.

#gen-opportunities

BMES isn't the only organization that offers great opportunities, and this is the space where we open up the floor to all of the other opportunities that other organizations or individuals may want to share with our audience.

#gen-courseadvice

People are often planning their course load throughout the year, and this channel provides a quick place to crowd-source advising. It leverages the wide pool of collective knowledge in our community in an accessible form.

Sustainability Initiative

Our chapter recently constructed a sustainability initiative, which was designed to reduce the significant amount of waste that we create throughout the course of our many events. For example, we typically use disposable plates, cups, and water bottles at various picnic events, dinners, retreats, and networking opportunities. This sustainability initiative primarily was an investment in reusable tableware to offset the environmental impact of generating waste in the form of disposable tableware. We purchased high-quality cups, plates, and forks for our large-scale dinner events. Although the cost of these items posed a significant financial burden, our chapter was willing to undertake this investment to do our part for sustainability and the greater good. On a smaller scale, this initiative also included the laser-cutting of wood nametags; again, this was done in an effort to reduce waste from paper nametags from many of our events which required them.



Other Activities

Humans of BioE

Humans of BioE is a project run through our social media platforms (Instagram and Facebook - @calbmes) that serves to highlight the stories of those involved in bioengineering at Berkeley. Short snippets pulled from interviews with professors, undergraduates, and graduate students are paired with photos that capture the voice behind the interviewee. This pairing serves to spotlight members of the community and ultimately inspire and give insight into what bioengineering means to the Berkeley community.

NATIONAL BMES MEETING

As far as we know, we haven't had very many members attending the National BMES Annual Meeting, other than a handful that presented their research. This is partially because National Membership was something that was offered but never really emphasized. As such, we hold very little institutional understanding of what the Annual Meeting and the National Membership have to offer our members specifically. Furthermore, we operate on a limited budget annually and cannot cover any fees or travel expenses, and it is difficult to encourage students to take on that financial burden when we ourselves do not have a good understanding of what the gain would be.

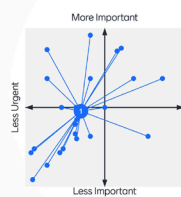
That being said, we are curious about what that broader BMES network can offer us. Part of our objective next year will be exploring this network further, including the Annual Meeting. At the end of the day, we prioritize enriching our members' experience and making as wide and deep an impact as possible. We will consider how the Annual Meeting fits into that objective.

FUTURE DIRECTIONS

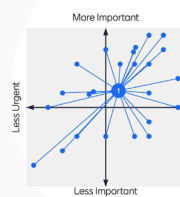
This past year, our chapter was particularly successful in increasing our membership as a whole. Our numerous outreach events early in the fall semester paid off, as we received a great number of general member and committee member applications than ever before. We also succeeded in meeting our goal of improved branding and publicity as a means of improving member engagement. Our chapter revamped our branding guidelines and excelled at growing our social media presence to better meet the needs of our members. Through mediums such as Slack, Instagram, Facebook, and LinkedIn, we leveraged technology to interface with members and the community at large, such as our expansive alumni network or our connections in industry. Finally, our chapter was able to achieve our goal of continuing to offer valuable professional development opportunities to our members. From tried-and-true events such as company tours, graduate student panels, professor luncheons, networking dinners, to newly implemented initiatives such as consulting and alumni coffee chats, our chapter organized it all: and yet, there is much to improve in the coming years.

Next year, we have an ambitious set of expectations in mind to continually improve our chapter. Over the last few months, our leadership team has been constructing a list of key priorities and chapter-wide needs to focus on for the 2020-2021 school year. In particular, we have estimated the relative importance and urgency of said needs to better organize our planning efforts. By far, our most important issue is member retention; in the coming months, we expect to address this matter primarily through restructuring our chapter's traditional events to better engage members overall. Likewise, our leadership team has found has prioritized innovation and sustainability for the coming year; given recent events not limited to the COVID-19 pandemic, we must creatively and quickly problem-solve to continue being an active and beneficial chapter. Some of our less pressing needs (yet still significant all the same) include better defining BMES' niche in the broader bioengineering community at UC Berkeley.

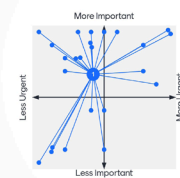
Alumni Engagement



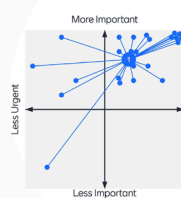
Committee Structure



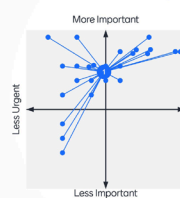
Defining BMES' niche in the broader Cal BioE community



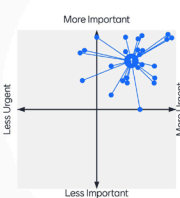
Innovation & Sustainability for the Future



Inter-committee relationships



Retention



Officer Core 2020-2021

Co-Presidents:

Stephen Lin (sjclin@berkeley.edu)
Emily Kim (emihk@berkeley.edu)

Treasurer:

Teresa Yang

Academic Chairs:

Aleysha Chen
Derek Ning

Design Chairs:

Loren Lee
Bryan Wong

Outreach Chairs:

Iris Hsu
Manasi Kumar

Co-Vice Presidents:

Luis Fernando Ayala
Kathy Le

Public Relations Chair:

Stephanie Jue

Corporate Chairs:

John Guan
Bernardus Edgar William

Fall Reception Chairs:

Arnav Raha
Patrick Young