



FISCHELL DEPARTMENT OF
BIOENGINEERING



Chapter Development Report

Biomedical Engineering Society at the University of Maryland, College Park 2020-2021

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2020-2021

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Executive Summary

This report outlines the events, programs, and activities upheld by the Biomedical Engineering Society chapter at the University of Maryland (UMD) between May 2020 and May 2021. We consider this year to be successful despite the limitations and hardships that faced our students and faculty, university, and world during this unprecedented time of COVID-19. This year, we upheld traditions of presenting our members with career and professional development opportunities for exposure to different post-graduation careers through events like panels and established guest speakers. We continued last year's mission of giving back to our community by hosting a STEM Crash Course for high school students. We introduced several new totally virtual events and hosted multiple online networking events, including our Second Annual Alumni Networking Event and a Fall Speed Networking Event.

Planning for the upcoming year will involve striving to further strengthen our partnerships with other university chapters of BMES and various engineering student groups at UMD while also promoting a stronger community within our department. We look forward to returning to hybrid and in-person events in the coming year, and we are prepared to overcome a variety of challenges associated with returning to these types of events. We are optimistic that our chapter will be able to continue to expand on opportunities for students despite the uncertainties that the upcoming school year faces. We need to exercise adaptability, creativity, and perseverance when planning events and hosting opportunities for our students, as many changes are sure to occur.

Nonetheless, our chapter is excited to continue providing opportunities for our students to thrive no matter the environment.

Letter from the President

June 1st, 2021

Dear Biomedical Engineering Society,

I am pleased to present our 2020-2021 Chapter Development report on behalf of the University of Maryland (UMD) BMES Chapter, BMES-UMD, that highlights the many successes we have had this year in creating professional development, outreach, and competition events for our chapter members, and surrounding UMD community. This year, despite being relegated to a totally-virtual environment, we continued to form connections with other UMD organizations, plan and host events for members, and transition many of our long-standing events to a virtual format. We plan to implement new strategies for hosting hybrid events in order to mitigate the uncertainty of the upcoming semesters within the BMES community.

Throughout this school year we continued a series of strong professional development events for students. We hosted distinguished speakers from major bioengineering industries including biotech, research, and health policy. We were also able to adapt our Spring Alumni Networking events to a virtual format, and introduced a new virtual Fall Speed Networking Event. In addition, we assisted in hosting the virtual Mid-Atlantic Research Competition, and collaborated with other UMD organizations to host a variety of professional lectures. We planned an Engineering Crash Course, but the limited turnout due to the online nature of the event necessitated the posting of the lessons online. We also had a strong showing in the virtual UMD Alumni Cup competition, and continued to host advising extravaganzas for students putting together their class schedules.

Some of our biggest accomplishments included the newfound collaborations within and outside our bioengineering department. At the beginning of the school year, we connected with other bioengineering clubs at UMD to collaborate on events in addition to sharing our events with each other's members. This teamwork transpired four times the amount of opportunities for our students in addition to greater attendance at our events. We worked with the bioengineering honors society, Alpha Eta Mu Beta (AEMB), the Society for Biomaterials (SFB), and Engineering World Health (EWH) throughout the year to collaborate on events and brainstorm ideas on how to best help all the students within each of our organizations. Beyond UMD, in planning the virtual Spring Networking event with industry professionals and the Mid-Atlantic Research Competition with Johns Hopkins University, the incredible collaborations between our chapters will instrumentally carry over into future planning and events between the universities, with plans to expand this event to all the universities in the area. The relationships we have established will help future chapter leaders ensure successful and collaborative events to allow students to build upon their network in the ever growing field of bioengineering. Additionally, having to adapt to the circumstances of COVID-19 demonstrates the resilience and adaptability of our chapter to drive forward our goals and events despite a virtual environment, for the betterment of the entire student body.

We are extremely proud of the work that our chapter has done this year. This has definitely been the most unprecedented and challenging year for our chapter, but we know that next year's executive board will further improve events for our BIOE community and make the most of the situation at hand.

Sincerely,

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I. Administration Report

BMES-UMD was run by seven undergraduate students this year, three of whom were a part of last year's executive board (Marisa Patsy, Alana Tillery, Samantha Kraus) and four of whom were newly elected. As a team headed by the president, Marisa Patsy, each officer focused on a subset of events that they planned for the organization. Focus this year included collaborating with other bioengineering organizations at UMD, introducing new professional speakers and events, and continuing our traditional events in an online format. Upcoming events were communicated through TerpLink, email, Facebook, and General Body Meetings.

Officers

The President worked diligently as the liaison between our chapter and our advisor, the department, the college, the University, and the national BMES. The president established priorities for the organization, supervised officers, and facilitated event planning. The VP of Academic Affairs and VP of Professional Affairs worked to bring in speakers from industry, academia, and government as part of our attempt to expose students to career paths in BIOE. The

VP of Service & Outreach worked to host events such as the STEM Expo and Crash Course in Bioengineering, both of which engaged local elementary, middle, and high school students to be excited about STEM. All these events required monetary resources, which our VP of Finance did an excellent job acquiring and maintaining. All funding, grant applications, and merchandise sales were handled by the VP of Finance. The VP of Competitions served as the team captain for our bioengineering team in the engineering school Alumni Cup Rube Goldberg design competition and led new initiatives for undergraduate design competition teams. Finally, our VP of Communications advertised all events through Terplink and social media, keeping track of involvement points for members, and maintaining our website. Overall, our board worked diligently to establish useful events for our members.

President: Marisa Patsy (mpatsy1@terpmail.umd.edu)

VP of Finance: Lydia Runnals (lydiarun1@gmail.com)

VP of Academic Affairs: Samantha Kraus (skraus@terpmail.umd.edu)

VP of Professional Affairs: Marisa Patsy (mpatsy1@terpmail.umd.edu)

VP of Service & Outreach: Alana Tillery (atille88@gmail.com)

VP of Communications: Juliana Pitzer (jpitzer1@terpmail.umd.edu)

VP of Competitions: Ezra Cho (ezracho2000@gmail.com)

Membership

Our chapter has 280 student members registered on TerpLink, which is approximately 50% of our undergraduate bioengineering student body. Our Facebook page has approximately 430 likes, aiding our efforts to reach students and the community via social media. We also expanded our social media account on Instagram, and have grown our presence on LinkedIn to expand our alumni network, all in an attempt to inform more people about our BMES chapter. We also instituted a BMES GroupMe chat for event reminders and general discussion. This GroupMe currently has 95 active members. This school year we saw a decrease in active membership, which is distinguished by members who attain 10 points by the end of the year. Each event counts for approximately 1 point, with longer all-day events counting for 2-3 points. This may be attributed to the online nature of all of our events. Next year, we plan to reintroduce in-person and hybrid events in order to encourage participation, as well as readjust the point system so that students' points for more demanding events, like all day volunteering events, will better reflect their commitment to our chapter. Although the actual number of students who achieved the point threshold decreased, we maintained a sizable amount of activity within our chapter and had a number of non-BMES students participate in events, leading to a fantastic turnout at nearly all of our events. For next year, it is important to take forward these observations and make the appropriate adjustments. All of our officers, in addition to approximately 5 other chapter members, are national BMES members.

Executive and General Body Meetings

The executive board met on a weekly basis during the fall semester to ensure prompt planning of events, and maintained consistent communication over group messaging. Formal meetings are listed in the table below. General body meetings were held once at the beginning of each semester to introduce members to BMES and the event plans for the semester. Professional,

academic, and service events are initially announced at the GBM, and reminder emails sent the week prior to the event as notice. We also utilized social media as a way to advertise events and ensure greater turnout from our chapter. This method showed success, as our attendance at events increased from last year.

Meetings	Topic	Attendance
August 29, 2020 - Beginning of Fall Semester Executive Board Meeting	Met during first week of school to discuss goals and events for the upcoming school year	Entire executive board (7 students)
September 2020 - April 2021 (bi-weekly) Meeting with Faculty Advisor	President met in person with our faculty advisor to continue event planning and goal setting for the upcoming year. Began preparation for GBM and upcoming recruitment.	President and Faculty Advisor
September 21, 2020 - Fall GBM	Welcome to BMES: The executive board gave an overview of BMES at UMD, goals for the year, and upcoming events for the fall semester.	40 undergraduate students
August 2020 - March 2021 - Executive Board Meetings	Met as an executive board weekly to discuss planning for events	Entire executive board (7 students)
February 8, 2021 - Spring GBM	Outlined the upcoming events for the spring semester and welcomed new members to BMES	30 undergraduate students
February 6, 2021 - Alumni Cup Interest Meeting	An overview of A. James Clark School of Engineering Virtual Alumni Cup Competition introduced to members in order to gather student interest in joining the design team and increase excitement for the competition.	~10 undergraduate students
February-March 2021 - Mid Atlantic Research Competition Planning	Met with members of Johns Hopkins University BMES executive board via Google Hangouts to discuss upcoming join BMES Mid-Atlantic Research Competition	UMD + JHU core executive board members
February 2021 - April 2021- Virtual Spring Networking Event Planning	Met with members of the Fischell Department of Bioengineering to discuss and plan for the Virtual Spring Networking Event	UMD executive board members and BIOE Department Members
May 19, 2021 - End of the Semester/Officer Transition Meeting	Discussed feedback from this year, goals for next year, and transitions from current to new executive board. Our faculty advisor, department chair, and department director of operations were also present.	Current and Newly elected board members & faculty advisor

II. Treasury Report

This past year, we maintained fundraising techniques to raise the money required to host the events that best showcased our BMES chapter. The department supported our chapter by providing necessary funds, however, fundraising and obtaining grants or sponsorships were required to obtain substantial funds. Like last year, we continued selling BMES-UMD branded merchandise. We also received funds from the Pepsi Enhancement Funds, awarded by PepsiCo

to programs that enhance academic and community pursuits in addition to a grant awarded by the Women in Engineering Program.

Financial summary:

A significant portion of the revenue generated by the organization this year was through departmental requisition rewarded as a result of the dedicated loyalty the organization has shown to the undergraduate student body. Various fundraisers held by our group also generated a large part of our revenue. Fundraisers included merchandise sales, working at the University career fairs, and local restaurant events. The money spent by our chapter was significantly smaller this academic year, due to the virtual nature of our events. Please find our balance sheet below, with the red number indicating money spent.

Balance sheet:*

August 2020	Fundraising Match from 2019-2020	\$631.73
August 2020	BMES Support from Department	\$800
9/19/20	BMES Virtual Annual Meeting	\$750.00
Multiple Dates	Fundraising Efforts (Merchandise, Career Fair, Local Restaurant Events)	\$205.66
Total Current Expenditures		\$681.73

* This balance sheet only includes those transactions made in the 2020-2021 school year so the total expenditure figure does not include money saved from previous years.

**Our bioengineering department has pledged to match the money we raised in fundraising (2012-2021 school year), up to \$1500. The \$195.66 that we fundraised will be received in the beginning of the 2021 Fall semester.

***Multiple grants from Pepsi and the Women in Engineering Program were awarded for events that were supposed to happen in the spring semester. Due to the move to virtual learning, these events were cancelled. The funds from Pepsi were returned and the funds from WIE will be used in the 2021 Fall semester.

III. Chapter Activities

III-A. Industry and Professional Development Activities

One of our primary goals is to encourage undergraduate students to explore the field of bioengineering through interaction with the bioengineering community. To achieve this, we held a variety of events throughout the year ranging from speaker talks to professional industry panels. Events were open to all members, majors and anyone in the UMD community and were funded through departmental and corporate sponsorships. These talks and events allowed students to network with professionals in different fields, and explore the various career paths available to bioengineers post-graduation. These events covered almost all the main career areas stemming from bioengineering including medical devices, biopharmaceuticals (research and manufacturing), prosthetics, consulting, entrepreneurship, and academia.

1. Lecture Series: Bioengineering Professions

We invited speakers from a variety of careers related to bioengineering to help undergraduates explore the wide-ranging possibilities they have following their collegiate studies. We collaborated with the UMD Chapter of Engineering World Health on recruiting speakers and running the events. We intend to continue with the lecture series in the coming year, and hope to return to the in-person format.

Audience: All Bioengineering students.

Graduate and Medical School: 4 graduates in various graduate and medical programs came to speak about their experiences and opportunities within higher education.	September 30, 2020	~10 undergraduate students
Consulting: Two consulting professionals came to speak about their experiences and careers.	October 7, 2020	~10 undergraduate students
Prosthetics and Robotics: Three professionals in prosthetics and robotics, including Dr. Axel Krieger, Angie Bryl, and Dr. Aaron Fleischmann, came to speak about the development of prosthetics and career opportunities.	October 21, 2020	~15 undergraduate students
Pharmaceuticals: Three UMD alumni currently employed in the pharmaceutical industry came to speak about their career path, opportunities, and advice.	November 4, 2020	~10 undergraduate students
Cell and Molecular Research: Four researchers, including professors and postdoctoral researchers at UMD, presented on their research, career paths, and advice for students interested in research.	November 18, 2020	~5 undergraduate students
Medical Devices: Three medical devices professionals, including professors at UMD, presented on the development of various medical devices and career opportunities.	December 2, 2020	~10 undergraduate students

2. Lecture Series: Graduate School for Bioengineering

The Bioengineering Post-Grad panel listed in the industry section above also included guests currently in graduate programs, serving as a dual purpose event for alumni from both industry and graduate school to share their experiences. This event is listed in both sections for this reason. For students interested in medical school, we invited a student representative from Kaplan Test Prep to present on preparing for, testing, and applying to medical school.

Audience: Bioengineering students interested in graduate or medical school.

UMD Bioengineering Research Panel: Undergraduate and graduate student representatives from each of the research labs within the Fischell Department of Bioengineering presented on their lab's research and how to get involved	Oct. 28, 2020	10 undergraduate students + 4 UMD Graduate Students
UMD Graduate School Review: BMES-UMD Faculty Advisor, Dr. Steven Jay, provided advice to prospective graduate students	November 13, 2020	~5 undergraduate students
Departmental Honors Information Session: Collaborative event with AEMB - Current program members talk about what it entails to be a part of this program and the benefits of participating on future plans of graduate school	March 2, 2021	~10 undergraduate students

3. Laboratory Tour Event Series

In past years, we have made a significant effort to introduce students to research opportunities within bioengineering by holding industry lab tours. During the 2020-2021 school year, we took advantage of the online nature of the semester and switched to video tours of UMD labs. We successfully provided video access to several UMD labs, and received positive feedback on this switch. We hope to continue these on-campus lab tours in the coming year and we are looking forward to reintroducing industry lab tours, so that the students can have exposure to the opportunities within and outside the department.

4. Professional Development & Career Networking

A. James Clark School Career Fair

The A. James Clark School of Engineering hosted a virtual Bioengineering/Chemical Engineering/Materials Science specific career fair in the Fall 2020 semester. A Bioengineering/Chemical Engineering career fair was hosted in the Spring 2021 semester. BMES worked with the Bioengineering Department to host and advertise events to aid in students being hired by bioengineering companies. Companies in attendance included MedImmune, BD, Meso Scale Diagnostics, GSK, and NIH. These events led to the recruitment of many of our members to both internships and full time positions.

Fall and Spring BMES Networking Events

This year, we expanded our networking events to include not only our Second Annual Alumni Spring Networking Event, but also a Fall Speed Networking Event. Both of these events serve to connect undergraduate students with our broad bioengineering network. Our Inaugural Speed Networking Event was extremely well-received, with attendees including undergraduate and graduate students, professors and faculty, alumni, and Fischell Department Advisory Board members. We are excited to continue this event in the coming year. Additionally, we planned a completely virtual Spring Networking event, with keynote speaker Dr. Patricia Gonzales-Hurtado. While the turnout for this event was lower than previous years, we hope to return to the established in-person format to encourage attendance. We hope to invite bioengineering alumni, graduate students, professors and researchers, in addition to other industry connections, to come network with undergraduate students in order to introduce them to various career paths from a degree in bioengineering. In the upcoming academic year, we hope to again partner with the Fischell Department of Bioengineering and the BIOE Advisory Board in order to make these events a success.

Audience: All Bioengineering students.

Fall Bioengineering / Chemical Engineering Networking Fair	October 30, 2020	~ 100 undergraduate students
Spring Bioengineering / Chemical Engineering Career Fair	April 1, 2021	~ 100 undergraduate students
Fall Speed Networking Event	November 12, 2020	~25 undergraduate students, ~30 alumni, faculty, and Advisory Board members

Virtual BMES Spring Networking Event	May 4, 2021	~15 undergraduate students, ~20 alumni faculty, and Advisory Board members
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5. Pre-Registration Advising Extravaganza Series

In preparation for registration for the Spring semester, upperclassmen students and the advising staff worked together to help students with curriculum-based planning and four year plans. With an increased curriculum focus on academic tracks and electives, we wanted to make sure students were comfortable in designing their academic path and registering for new classes. Advising Extravaganzas were held online via Zoom, due to the coronavirus.

Audience: All Bioengineering students, especially underclassmen.

Fall Registration Extravaganza #1	Oct. 21, 2010	~15 undergraduate students
Fall Registration Extravaganza #2	Oct. 27, 2020	~10 undergraduate students
Spring Registration Extravaganza #1	March 24, 2021	~10 undergraduate students
Spring Registration Extravaganza #2	March 30, 2021	~10 undergraduate students

IIIB. Social Events

BMES-UMD continuously seeks to foster a close-knit community of students on the University of Maryland campus who study bioengineering. These relationships were built through events planned both by our student chapter and the college. Some of these social events, such as the engineering picnic and Alumni Cup, were also designed to help students meet people outside of their academic year and major, instilling department and engineering pride within students. In the future, we hope to plan and devote more resources to increased social events, especially to collaborate more with other engineering clubs on campus, such as the American Institute of Chemical Engineers and American Society of Mechanical Engineers.

1. Freshman Welcome

BMES-UMD helped lead a virtual new student welcome for new BIOE students at the University of Maryland. BMES-UMD executive board members and chapter members met with new students to discuss the bioengineering program and student concerns. In the coming year, we hope to reintroduce the annual student welcome.

Audience: Freshmen Students

New Student Welcome	September 22, 2020	~15 freshmen students 7 BMES board representatives
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2. Engineering First Look Fair

The UMD Engineering School hosts an annual engineering picnic during the fall of every year. Each engineering society on campus has the option of hosting an activity during the engineering picnic. In lieu of the normal in-person event, the UMD Engineering School hosted a virtual

Engineering First Look Fair, where BMES-UMD heavily promoted the organization to prospective members. Any attendees to the fair were able to see the virtual BMES-UMD table, ask questions, and sign up for the listserv.

Audience: All undergraduate students.

Engineering Picnic	September 10, 2020	2 BMES volunteers 400+ Engineering Students
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3. First Look Fair

The university hosts the First Look Fair each year to entice new and old students alike to get involved on campus. BMES-UMD participated in the virtual First Look Fair with a Zoom room setup to advertise the organization and answer prospective members' questions.

Audience: All undergraduate students.

First Look Fair	September 16-17, 2020	~1000 attendants 10 BMES volunteers
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4. Virtual Alumni Cup

The Alumni Cup Competition is an annual inter-departmental competition hosted by the University of Maryland Engineering Alumni Association that tasks each engineering department team to create a Rube-Goldberg style machine. The machine must accomplish a specific task in a 20+ step sequence while following various design, time, and budget critiques. This year, in lieu of the normal in-person Rube Goldberg machine, students were instructed to create a Rube Goldberg video involving energy transfers in order to crack an egg. Students worked remotely to assemble parts of the device and create a final video, which was showcased at the end of the competition.

Audience: All engineering students.

Alumni Cup Competition	March 7, 2021	10 Bioengineering Team Members 400+ Engineering Students
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IIIC. Inter-chapter Activities

BMES-UMD recognizes the importance of interacting with BMES chapters at other universities to foster a network for exchanging ideas that can help enhance chapter growth. The University of Maryland is conveniently located near many other colleges in the Mid-Atlantic. This proximity allowed us to work with other local BMES-UMD chapters to co-host the Mid-Atlantic Research Fair with BMES chapters at Johns Hopkins University, George Mason University, University of Delaware and Widener University. Students presented their own research in addition to networking with researchers and students from other schools.

1. Mid-Atlantic Research Competition

The eighth annual Mid-Atlantic Research Competition was scheduled to be co-hosted virtually by the University of Maryland and Johns Hopkins University. This undergraduate fair and

competition allowed undergraduates from a variety of institutions, including UMD, JHU, George Mason University, Widener University, Georgetown University, University of Cincinnati, and the University of Delaware, to present their research in a friendly competition. BMES-UMD worked with the JHU executive board to plan the event. We are looking forward to reinstating this event in-person in the upcoming academic year, and also hope to include even more universities next year and maintain the ones that have previously attended. While the event historically has alternated between UMD and JHU's campus every year, future boards could consider the idea of including other universities in hosting and planning duties.

Audience: All Undergraduate Students

UMD-JHU Mid-Atlantic Research Competition	Apr. 10, 2021	~50 undergraduates from a variety of institutions
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IIID. Outreach Activities

Each year, our chapter strives to incorporate multiple service events to the bioengineering community as a way for members to give back to the university, the bioengineering department, and the Maryland community, while raising awareness of BMES and bioengineering. We hope to teach people about the applications that bioengineering has in the world as well as provide an opportunity for our students and community to grow their relationship with one another. It was distinctly more difficult to promote outside involvement; however, we strove to successfully transition events to an online format and are excited by the possibility of reinstating our in-person events in the coming year. The service and outreach events that we graciously participate in every year are as follows.

1. Crash Course

As our main fall community outreach event, we planned a STEM Crash Course event for local high school students. In order to circumvent the challenges of hosting a virtual, all-day event, we recorded various lessons for high school students that were later posted online for viewing. This event consisted of several different mini-lessons for students to interact with, including a Gel Electrophoresis lesson, a Python lesson, an electronics lesson, and a sensors lesson.

Audience: Local elementary, middle, and high school students.

BMES Crash Course	November 14, 2020	N/A
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2. STEM Expo Day

As our main spring community outreach event, we planned to host an all day event called "STEM Expo." The purpose of this event was to expose elementary school students to various STEM-related activities throughout the day. Unfortunately, this event was cancelled due to the coronavirus. We hope to re-implement this event in the upcoming academic year.

Audience: Local elementary school students.

STEM Expo Day	N/A	Cancelled due to COVID-19
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3. INOVA Blood Drives

Our ability to host blood drives this academic year was severely decreased by the pandemic; however, we still advertised INOVA Blood Drives as they occurred. In the coming year, we hope to return to hosting BMES-UMD Blood Drives, and promoting safe and healthy donations.

Audience: Entire engineering community, with focus on the bioengineering community

Fall Blood Drive	N/A	Cancelled due to COVID-19
Spring Blood Drive	N/A	Cancelled due to COVID-19

4. Maryland Day

Maryland Day was unfortunately cancelled due to the coronavirus. Next year, we plan to continue the tradition of planning engaging STEM-oriented activities for attendees.

III. Mentoring Activities

In addition to our outreach activities, we also pursue professional and social development for our members through a mentorship program. This provides a platform for upperclassmen to share their engineering experiences with underclassmen. Our mentoring activities brought together students from different backgrounds, interests, hobbies, and career goals to instill a sense of investment and pride for students in engineering.

Mentor-Mentee Program

Our mentoring activities were housed under our “Mentor-Mentee Program” which started in the fall semester by sending out a form to all UMD bioengineering students to gather interest in becoming a mentor or mentee. They shared specific interests, involvement, and post-graduation plans, which was used to create pairs that would be sustained throughout the rest of the year. At the beginning of the spring semester, we reached out to any students who wanted to join the program. Pairs were encouraged to reach out and communicate over email or Zoom throughout the course of the year.

Mentor-Mentee Program	Fall 2020 -Spring 2021	15 undergraduate mentors 15 undergraduate mentees
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IV. National BMES Meeting

UMD's presence at the National BMES Meeting this year was roughly the same as previous years, despite the virtual nature of the event. We had 3 BMES executive board members attend, in addition to multiple other students who attended the conference in order to present their research. Our students networked with BMES students from all over the country in many of the workshops and luncheons, as well as with prospective graduate schools and employers. They

also participated in the student professional development activities and supported the research track events led by a couple of professors within the Fischell Department of Bioengineering. We hope to have a decent turnout at the 2021 BMES National Meeting, accounting for the distance from campus and the possibility that the meeting will be hosted online.

V. Future Directions

From this past year, our executive board is extremely pleased with the growth and improvement of the BMES-UMD chapter. Despite the challenges posed by the coronavirus pandemic and the transition to virtual events, we have continued to uphold the integrity of our professional, academic, and service events. In addition, we have consistently shown success in competitions, strengthened relationships with our department, and have expanded unique networking opportunities for our members. We plan on continuing to improve our BMES chapter by providing quality events to all members, as well as maintaining strong connections to the organizations and communities that helped make it possible. We have several specific goals for the upcoming school year in which we plan to focus our efforts.

One of our primary goals is to further improve communications with our members, and ensure excitement about the events we are hosting. We plan to continue sending out weekly emails to our members, as well as continue use of our BMES GroupMe. This consistency will facilitate greater awareness for our events in advance. We plan to further grow our social media presence on Facebook and Instagram, as a way for our members and the community to see all the amazing things we are up to. Our executive board has again shown great improvement in terms of communication within the board, and has demonstrated ability to work independently and as a team.

Social involvement is crucial to a student's development and success in a career beyond the university, enhancing their ability to make connections. In the upcoming year, we hope to improve the relationships between our members by facilitating more social events like dinners and intramural sports, such that our members are able to expand their relationships with one another beyond an academic setting in the classroom and BMES meetings, enhancing a supportive and closely-knit group of students. The planning of these events was made difficult by the restrictive virtual nature, but we plan to host more social events as well move towards hybrid and in-person learning.

The bioengineering field is interdisciplinary by nature, such that we are in a unique position to bring multiple disciplines together in a cohesive manner to create innovative technologies. To encourage this, we plan on meeting a past goal of reaching out to other engineering organizations such as the chemical, materials science, and mechanical engineering student groups on campus to increase the amount of collaboration between students. We also plan to continue improving the professional networking opportunities for our students by continuing to host our annual spring networking event and our new fall speed networking event. This more casual setting is so important to have such that students are able to meet and openly talk with alumni and professionals about their experiences, in hopes of narrowing down their passions into a specific

career. A strong relationship with our department is necessary to host this event, which we will also continue to foster in the upcoming school year.

Despite the University of Maryland's plan to return to in-person learning in the Fall 2021 semester, we understand and expect that many students may be uncomfortable with returning to in-person events, especially indoor events. As a result, we hope to plan many hybrid events that will assure student participation and safety, and will provide opportunities for both in-person and virtual involvement. We may also utilize outdoor meeting spaces to hold larger events. We plan to utilize group meetings via Zoom or similar platforms to host larger events.

We are extremely excited to improve our chapter while providing the best resources possible to the bioengineering students we stand to benefit. We plan to maintain the involvement that we have seen this past year, and hope to try and encourage even more students to come and take advantage of the opportunities we are presenting to them. The BMES-UMD chapter is excited to continue its growth into the 2021-2022 school year, and we are equally excited to maintain our strong relationship with the department and all those involved with making our events great and resourceful for the BIOE community.