



St. Michael's High School Biomedical Engineering Society

2020-2021

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The St. Michaels Middle High School Chapter is submitting their first ever Chapter Development Report. Due to the Covid-19 Pandemic, there are a few sections we were unable to complete due to the nature of quarantining and the lack of our abilities to meet with students and professionals in person.

Cover Letter

During the Summer of 2020, amidst a pandemic, rising sophomore JT Lizewski approached me about starting a biomedical engineering club at our school, St. Michaels Middle High School. I immediately started my research, reaching out to biomedical science colleagues from across the country, inquiring if anyone else was a faculty advisor at their schools. When realizing that BMES was tailored more towards collegiates and professionals, I became excited at the prospect of becoming one of the few high school BMES chapters. Our school very much needs an organization like BMES. Living in a rural community, most students do not have the exposure to careers in the biomedical and engineering fields. We have excellent programs in engineering and biomedical science through Project Lead the Way and I believe adding BMES will help foster a relationship between the two Career and Technology pathways.

Perhaps starting BMES during the virtual pandemic year we've had was a blessing in disguise. Our leadership is young- mostly sophomores. Because of our situation, we had the opportunity to reflect on what we want to do as an organization. We have had the ability to talk to professionals from across the country as well as current college students and recent graduates beginning their careers. We have been able to lay down a foundation so that when we return to normal, we can hit the ground running.

I am honored to be the faculty advisor to this young, talented group of students and I'm excited to see what the future holds for this organization. I can already tell that this organization is different from others on our campus. It is filled with goal-oriented students who know that there's so much more out there than what our immediate, geographical community can provide for them. And the students know it's up to them to create experiences that will help them forge a path into the medical and biomedical engineering fields.

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III.

Administrative Report

Chapter Officer Information

After winter break, we established a leadership plan. We sent out a document allowing members to pick what they wished to be in terms of a leadership role and then the club decided as a group who was to be chosen. JT Lizewski, the founder of the club, was chosen as President. JT also filled the role of Treasurer with Mrs. Greer at times. In terms of Vice Presidents, we decided to have 2. Tori Batley would run programming and internal club affairs while Macy Motovidlak dealt with reaching out into our community to see what we could do. Our Secretary was filled by Micheal DeSilvestro who handled the agenda and attendance. Finally, Maxine Poe Jensen was picked for Brand Manager. We decided to add “Brand Manager” as a leadership role to fulfill the need of Historian but blending with social media, recruitment of members, and help lead the chapter development report.

Membership Breakdown

JT Lizewski*: President

Macy Motovidlak*: Vice President of Community Outreach

Tori Batley*: Vice President of Programming

Michael DiSilvestro: Secretary

Maxine Poe-Jensen: Brand Manager

Mackenzie Fox*: Member

Abbie Kemp: Member

Bailey Blades*: Member

Alyssa Wojick: Member

Karina Colon: Member

Mecala Jones: Member

*Denotes National BMES Member

Click here for Chapter Meeting [Dates](#), Attendance, and [Agenda](#) Document

IV.

Treasury Report

Since this was our first year of operation and we were in the midst of a pandemic with virtual meetings, we relied on a donation from the school to fund 5 members. We were able to host a fundraiser, Pie-a-Teacher, at the end of the school year, which coincided with our Green Schools Celebration. Since we were mostly virtual, faculty advisor Lauren Greer managed to secure funding through a fund in our school budget. One goal for next year is to secure a few grants in order to increase and provide programming for chapter programs as well as community and mentoring programs.

Item	Amount	Balance
Donation for dues- SMMHS	\$150.00	\$150.00
BMES Dues for 5 students	-\$150.00	\$0
Pie a Teacher Fundraiser	\$151.22	\$151.22

Chapter Activities

Zoom meeting with Brianna Redman, a medical student at University of Maryland.



Zoom meeting with John Hopkins University's BMES Leaders



Zoom meeting with Taffie Wilson, Nurse at Easton Memorial Hospital

Zoom meeting with Delia Fridel, graduate



One of our members (Macy) is using a phlebotomy kit.

JT and Michael (members) running the fundraiser.



Abstract of all Chapter Activities

At the start of our club, our school was attending class via zoom. So in turn, so did we. Despite these virtual obstacles, we tried our best to start this club strong with things to do. We met once a week and had to adapt to the zoom meeting, which was particularly difficult since this is the club's first year. Immediately, we established our goals for the year. This included doing engaging biomedical activities such as labs along with mentoring younger students. After the first few meetings, we had talked with a few speakers including Delia Friel, a Med Student at Dartmouth College and Brianne Redman, another Med Student who attended UMD. Around January, we finally gained footing in the organization of our club by establishing a President, 2 Vice Presidents, a Secretary, and a Brand Manager. When we returned back fully in person in April, we got right to work putting our goals into action. For one of the labs, we had a few members practice drawing blood from a fake arm. Then we had our first fundraising event at our school. Students would pay for a teacher to get pied in the face. They would then enter a raffle that gave them a chance to pie said teacher if they won. We made and hung posters around the school advertising this fundraiser, while hopefully recruiting new members.

VII.

Social or Other Activities

The middle and high school teachers that were pied as a result of our fundraiser.



During our school's annual Green Week, our club put together a fundraiser that involved staff and students. During our next meeting, we delegated jobs for each of the members in order to create the fundraiser. This included members asking for staff to volunteer to get pied, making signs to publicize the event and coordinating among ourselves as to who would sit at our fundraising table during lunch. We raised money for a week, members alternating at middle and high school lunches. We raised \$151.22 for our club, while also expanding our network on campus and making sure our club can continue to achieve our goals for the next school year.

Attendance: All club members were present for the fundraiser

Cost: \$0 - materials were donated

VIII.

Inter-Chapter Activities

During the pandemic, we were unable to meet face to face. However, we were still able to talk with students and professionals in the biomedical field virtually. We gained valuable information from students from the Johns Hopkins University BMES Chapter, medical students and professionals that are actively working with biomedical sciences. The Johns Hopkins students we met ran their own chapter of BMES which allowed our club members to ask questions and advice as to how to successfully run a BMES club. By exchanging ideas, we left the meeting with a better understanding of club structure, fundraising, and goals for our own club. This information not only helped deepen our understanding of the biomedical field and the wealth of careers it offers, but also gave us first hand insight into the path to a biomedical career that our speakers went through themselves.

Attendance: 10 out of 12 members were present for our meeting with Johns Hopkins University BMES chapter.

Cost: Free

IX.

Outreach Activities

During our meeting on January 26, 2021, Mr. Robert Degour discussed the need for volunteers for our community's fifth year of STEM Camp, an opportunity to help younger students who are struggling academically. Five members of our society signed up to be STEM Leaders, planning to volunteer their time for the camp from 10:30 to 3:30 on June 28 to July 1. In the past, this camp has allowed for growth in the interest of younger students with math and sciences. Our chapter's relations with Mr. Degour allowed for improvements in both organizations, giving STEM Camp the handful of volunteers it needs to function and our chapter experience with younger students who are struggling academically. This experience will allow our chapter to better understand how to work with young students in our community, something we hope to pursue more in the future as it becomes safer to do so.

X.

Mentoring Activities

Due to the COVID-19 pandemic, mentoring opportunities were difficult to obtain this year. We are excited to explore opportunities to mentor younger students as well as find professional mentors for our students.

XI.

Industry and Professional Development Activities



One of our first meetings, we met with Dr. Thomas Nieland from Tufts University over zoom. His research focuses on developing novel tissue engineering approaches to elucidate the molecular pathways and cellular and neural circuit defects that cause psychiatric and neurodegenerative disorders. He discussed his research with the students and shared his journey from starting off as a student from the Netherlands to his positions at some of the most prestigious universities in the world.



Our BMES Chapter met with Mr. Greg Brauntz, Board Certified Prosthetist from Ossur who presented to us about the design and product life cycle of prosthetics as well as the human element of working with patients. He also shared his educational pathways that led him to his current career. [Here is a link to his webinar.](#)

XIV . **Future Direction**

This year we met and exceeded our goals. First, we established the first BMES High School Chapter in the state of Maryland- which is great considering BMES is headquartered here! Second, we established leadership positions and roles within the organization. We were able to speak with professionals and college undergraduates about their experiences as students, internships, and their current or future careers. As we look forward to the 2021-2022 school year, the St. Michaels Middle High School Chapter has developed a list of goals we would like to achieve.

Summation of Next Year's Chapter Goals

- Mentoring / Tutoring
 - Middle School Students - for recruitment purposes
 - High School Students - for recruitment but also as service learning
- Hands on Learning
 - Experiments, lab kits i.e. phlebotomy arm or suture kit, coding, prosthetics
- Field trips to Biomedical establishments
- Meetings with Biomedical professionals
- Attending the joint poster session (Mid-Atlantic Research Competition) with Johns Hopkins University and University of Maryland BMES chapters
- Create a more comprehensive fundraising plan in order to sustain activities and membership
- Apply for local grants