



Lafayette College
Chapter

ENGINEERS WITHOUT BORDERS

2024 NEWSLETTER



EWB Temple University Summit

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Bridge Building and Egg Drop Competitions



Professional
Development Day with
Society of Women
Engineers and Gateway
Career Center



Volunteering at Wilson
Borough Elementary
School STEM Night

Letter From The President

Written by Finlay Smith

This year has been a great success for Engineers Without Borders at Lafayette College. I am extremely proud to say that I was the president of this club over the year of 2024 and am excited to see the success continue. I am grateful for the executive board, project leaders and general body members who have pushed the progress of the club and helped to build what it is today.

I took over from Charlie Foster as the president of EWB at the beginning of 2024 after being the vice president the previous year, and project leader for the micro food pantries project in the previous year. I was involved in the club from the beginning of my first year at Lafayette in the micro food pantries project and took over from Ian Duffy, previous outreach chair, as he went abroad in the Spring of 2022. This position really helped to develop my leadership skills and we managed to complete the project at the end of the calendar year. I then became the vice president just before going abroad and eventually became president. The roles I have had helped to transition me into a better place for the next role. Charlie was a great role model as president when I was in the vice president position and ensured I was prepared for the role before taking over. These positions have given me invaluable experience in leadership and give me a unique perspective as I prepare for a career outside of college.

I would also like to thank the rest of the executive board during my presidency for Supporting me throughout the year: Pacey Ely (Vice President), Imaan Ali (Treasurer), Joe Laughinghouse (Outreach Chair), Reece Metchick (Outreach Chair), Daniel Throne (Communications Chair), Brandon Quinn (Public Relations Chair), and Avery Sichel (Public Relations Chair). I am very proud of the events and projects we have brought to the club including an alumni panel and a multitude of new contacts on and off campus. Additionally, we attended the regional Engineers Without Borders conference at Temple University in Philadelphia where we were able to connect with other chapters and learn about their projects. I hope that the progress we have made this year will ensure that future years will continue to thrive and push the club forward.

In addition to executive board members, our chapter advisors aid the club to succeed. This year we had Professor Toby Rossmann for the whole year, Professor Arthur Kney in the Spring semester and Professor David Brandes in the Fall semester. Each of these advisors used their experience and unique perspective to ensure positive progress was always made. Professor Kney stepped down from service to the club at the end of the Spring semester as he plans to retire very soon. He has been an advisor and friend to the club and we would therefore like to thank him profoundly for his service and his contributions to the club. Me and the vice president, Pacey Ely, met weekly with them to discuss projects and improvements that could be made to them as well as the overall running of the club. We would like to thank the advisors for their advice and support they constantly bring to Engineers Without Borders

I am very proud to be passing the torch to Pacey Ely who has served on the board since his second semester at Lafayette. He has many great ideas and constantly brings new ideas to the table. I am so thankful to be a part of the club for so long and for the opportunity to be project leader, vice president and finally, president of the club. I know the club is in good hands with the future president and executive board and I am excited to see progress and positive impact on the community we always strive to create.

Sincerely,
Finn Smith
Class of 2025
President 2024

PROJECT UPDATES

Thrift Store



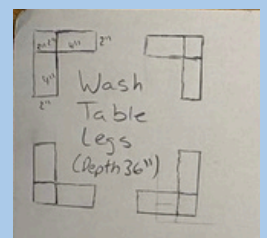
Lafayette EWB is working with the Office of Sustainability on creating a better way to display and organize the clothing for the Thrift Store. This project is a 6' x 6' wooden display rack for the store in the basement of Pardee. Currently, they have disorganized clothing racks and tables they put the clothing on. Having a rack to hang up the clothing and put out featured/new items is a great way to keep the store organized and display the clothes they want to showcase. The team working on the display rack has all the materials needed for completion and the build will continue into the Fall of 2025. The frame and the back plywood for the display rack is completed. The closet rod was also recently installed. The goal for next semester is to finish putting the plywood onto the frame and to add the shelves and wheels! Looking ahead, the team will maintain close communication with the Office of Sustainability to ensure that the final design aligns with the desired aesthetic and functional goals of the Thrift Store. This collaborative effort aims to enhance both the usability and visual coherence of the space.

PROJECT UPDATES

LaFarm Project

The LaFarm project was able to put together designs for a rinse table and dunking station this year. After some difficulty with which portion of the project would be the responsibility of EWB, an assembly line wash station was chosen to move forward with for EWB's section of the project. Members were taught Fusion, allow each person to make their own models of the wash station components. The team also sat in on meetings with the client, Farmer Josh, to understand the desires and needs of the project. Designs were then modified to properly fit within Farmer Josh's needs. In association with LaFarm and the civil engineering capstone project, a self-sufficient washing station was designed and a pavilion was partially constructed from a kit bought by LaFarm with the help of EWB members. Materials for the rinse table and dunking station were purchased and construction of the rinse and dunking station will be continued next semester under the leadership of Kyle Martinez and Dyonis Diaz.

Next semester some small changes will be made to the rinse and dunking tables to fully fit with the comments from Farmer Josh. Building will begin shortly after with two rinse and dunking tables that will be able to double as a place for fruits and vegetables to dry. The pavilion will also be finished with assistance from LaFarm. The wash assembly line should be fully functional by the spring of 2026.



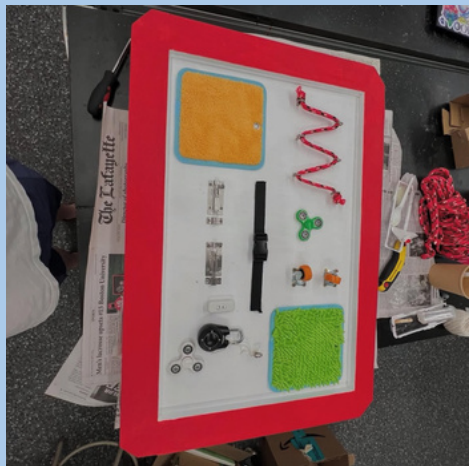
PROJECT UPDATES

Dementia Boards Project

Dementia Boards is a Lafayette College EWB project in partnership with Gracedale Nursing Home that aims to supply the dementia floor of their home with sensory boards. Studies show that interacting with tactile items and practicing fine motor skills helps slow the onset of dementia, and provides an interesting and rewarding experience for the users. After a year of designing and constructing the first board, it was delivered at the end of the Fall 2024 semester.

After a successful reception by the residents at Gracedale, the Dementia Boards team was asked to manufacture additional boards for use with their residents, extending on the original scope of the project. Building off of the design developed for the first board, the group successfully manufactured three more boards during the Spring 2025 semester, and officially finished the project.

This project was a rewarding experience for all that were involved. The team was able to communicate fluidly with the client, and ensure that the final product lived up to the specifications required by the client. The Lafayette College EWB Chapter is grateful for the continued support shown by Gracedale Nursing Home and are excited to keep the door open for potential collaboration in the future!



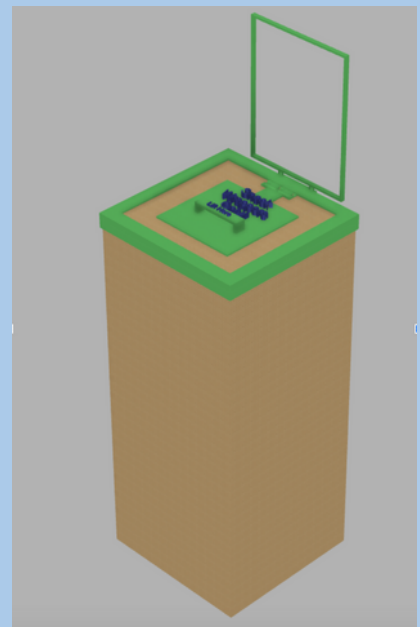
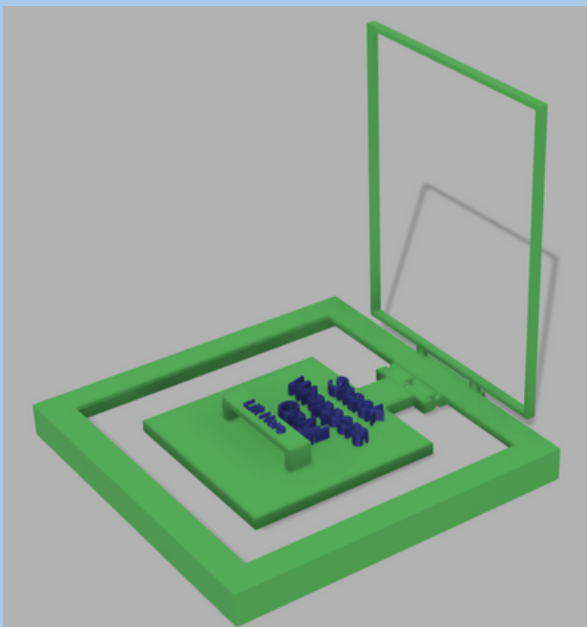
PROJECT UPDATES

Terracycle Project

The Terracycle Trash Can Project is a collaboration between EWB and Lafayette's Sustainability department to help improve the functionality of Sustainability's Terracycle bins, which are cardboard trash bins meant for throwing out specified items. The goal for this project is to make a lid that would encourage people to pay attention to the specified item, while also being durable, easy to take off the bin, simple to manufacture, and modular for fitting all the Terracycle bin sizes.

As of the end of this year, we were able to achieve the second functional prototype of the project, with the initial planning and designing during fall semester, and the organizing of the first two prototypes during spring semester. The current design uses a vice-grip through bolts on the sides for temporary fit of all sizes of trash bins and is mostly 3D-printable for easy manufacturing.

We established a design that decently fulfilled all parts of our goal, and now the next steps are to make further improvements so that the final product is condensed, polished, and well-prepared for full use. Specifically, we aim to make the hinge connecting the opening hatch 3D printed, as this is currently represented through a metal hinge, so that the entire design of the trash can lid is 3D-printable. We hope to move the modularity from being facilitated purely by a vice grip created by the bolts on the sides to separating the center piece into a system of pieces.



Advisor Acknowledgement

The success of our chapter relies entirely on the continued support and guidance of our faculty advisors. Their expertise and advice ensure that EWB is able to effectively apply our engineering skills across all our projects. This past year, we were extremely fortunate to be advised by Professor Toby Rossmann in the Mechanical Engineering department and Professor David Brandes in the Civil Engineering department.

Both professors have served as our faculty advisors throughout the year, offering invaluable insight and support. Their involvement helps shape the direction of each project and ensures we remain aligned with both our technical goals and broader community impact. Weekly meetings between the President, Vice President, and faculty advisors provide a space to discuss project progress, brainstorm new ideas, and find useful contacts and resources.

Our faculty advisors are the cornerstone of EWB's positive impact on the Lafayette and Easton community. Their mentorship allows us to tackle challenges with confidence, make steady progress on initiatives, and continue serving the local community through meaningful engineering work. We are deeply grateful for their ongoing dedication and leadership and would not be the club we are today without them.

Thank you Professor Rossmann and Professor Brandes for all you do.

Pacey Ely

President of Lafayette College EWB



Professor Toby Rossmann
Associate Professor of Mechanical
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Professor David Brandes
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