

Engineering Newsletter

Hello everyone! As CTE Ambassadors, it is our responsibility to keep our community updated and connected to the career and technical pathways within Shelby County Public Schools. To start, we would like to introduce ourselves as the Engineering Ambassadors Team: Alyssa Brown (senior), Lily Sego (senior), Jonathan Stover (senior), and Josiah Midkiff (Sophomore). We are excited to begin this newsletter to keep you informed on the engineering pathway and give you a backstage look on our educational lives.

My name is Josiah Midkiff and I am a sophomore in the engineering pathway at Martha Layne Collins High School. I'm honored and thrilled to see what's next as an ambassador this year. I am in Engineering 2 for my engineering course this year.

In the past two months, we reintroduced the basic design processes and got reaccumulated with CAD. For the past two weeks we have been working on our shoe design project. We had to design a shoe with several criteria, build it with limited materials, test, and present our process/finished project. I created a shoe that had interchangeable insoles for all of the clients' different needs. My client needed a shoe for everyday life, rock climbing, field hockey and basketball. The shoe that I designed met all of the client's needs and was approved by several classmates while collecting feedback. In conclusion, this has been a very successful start to the year for the Engineering 2 class.

Hello! My name is Lily Sego and I am a senior in the engineering pathway at Martha Layne Collins High School. This year I am enrolled in two engineering courses: Introduction to Architecture and CAD and Senior Engineering Capstone. This month I will be giving you an insight to our Capstone class. Capstone is a year-long course where students are challenged to use their learnings from Project Lead The Way (PLTW) to research, design, develop, and present a solution to a real-world problem. In order to take this class, students must take Introduction to Engineering Design (IED), Principles of Engineering (POE), and either Civil, Digital Electronics, or Aerospace Engineering.

This month has been busy for Capstone students. We began September by doing a mini design project. We were asked to choose an issue and design a real-world solution to improve said issue. My group chose to develop an assistive accessibility device. For our project, we designed, 3D printed, and tested an assistive writing device for individuals with disabilities. We had to propose our idea, design and modify our project, and present our final design processes. After completing this assignment, we began brainstorming and researching ideas for our year-long project. We are in the process of making problem statement proposals.

My name is Jonathan Stover and I am a senior in the engineering pathway at Martha Layne Collins High School. I have been in this pathway for all four years of high school, and I'm excited to be an ambassador this year. I am enrolled in Senior Engineering Capstone for my primary engineering course this year. This year Collins added elective classes surrounding engineering concepts. These courses are available to all students regardless of your pathway. I am taking the Introduction to Architecture and CAD course which are each one semester long and count for half a credit. We are currently about halfway through our architecture class, and it has been a great experience.

In the past two months, we have learned the concepts of architecture, the difference between an architect and an architectural engineer, the architectural design process, and began a housing project. Last week we completed our client based project. We were paired up and challenged to survey our partners about what house they would want in five years. We established criteria, constraints, client wants, and began designing. I created a paper blueprint for my clients house and then designed it on Revit, a Computer-Aided Design (CAD) platform. My client wanted a 2,500 square foot, one-story, modern farm house. In the end, my client was pleased with my residential design.

Hi, I'm Alyssa Brown, and I have been part of the engineering pathway since my freshman year. Instead of taking a fourth-year engineering course, I decided to participate in Co-Op.

For my Co-Op, I work at the central office with Jon Swindler. My current project is going through and updating the safety maps for all buildings in the school district. For this I use a CAD-like software, and get to put my knowledge from engineering 1 into a real life situation. This internship has also given me the opportunity to visit construction sights, and see how engineers, construction workers, and architects collaborate in the work force.

Co-Oping has helped in preparing me for college by giving me a step up by gaining hands-on experience in CAD drawing, and allowing me to explore if engineering is the field I want to study in college.

Thank you for tuning in to our September newsletter. If you are wondering about upcoming or recent events in engineering check out our monthly calendar. Be sure to check out next month's newsletter to see what October has in store for engineering students. Until next time!

