



BUILT WORLD
ENTERPRISE

October 2022 Alumni Newsletter



Fall 2022 Built World Enterprise Members!

ACRP and Steel Bridge Placements from Last Year

Greg, Clark, Mary, and Drew placed 3rd in the Runway Safety category in the ACRP competition! Their design utilized a thermal detection system for runway incursion mitigation.

Thomas, Liam, Matt M., and Matt B. competed with the rest of MTU's Steel Bridge team at Nationals and placed 2nd in stiffness and efficiency and 5th overall! Congratulations to both teams for representing BWE and MTU well!



Built World Enterprise would like to welcome our new members Josh Nolan, Olivia Fair, Brock Sundberg, Tania Bernal, Eden Traub, Allison Olson, Averil Reno, Ryan Andrick, Christian Colvin, John Decator, Max Dvork, Parker Lyden and Ondrea Ream!

Current Group Projects

Steel Bridge



Thomas, Liam, Matt M, Matt B, Josh and Olivia are a part of the steel bridge team this year. This year, they are asked to design, fabricate and construct a bridge to serve as a hypothetical crossing in the San Diego National Wildlife Refuge. One challenge with the bridge this year is it must include an arch. The team is currently finishing up their design portion of their competition year. They have chosen a final design based on all the criteria and are completing final iterations before they begin their 3D model.

EPA Rainworks

Brock has joined Joe in improving the stormwater management of the Administration building on the Michigan Tech campus. They are looking at different layouts of green infrastructure to maximize infiltration rates for the stormwater. They are also looking into different programs that will help them evaluate the effectiveness of those green infrastructure designs.





EWB

Dylan and Tania are working with the Engineers Without Borders club this semester. They are still in the initial phases of starting a new project with the Fronterizo community who EWB has worked with since 2006. The goal of the project is to give the community easy access to water year-round. To do this, they plan on installing a solar-powered pumping system to a well, with hopes of finding a way to store the water and keep it clean when the well goes dry for 4 months.

ASCE Timber Strong

This year new members Ryan, Christian, John, Max, Parker and Ondrea are participating in a new competition! They are tasked with designing and building a 2-story wood light-framed building. The competition location has changed from Wayne State University to Western Kentucky University, so they have to adjust their budget. The team is looking forward to continuing their design on Civil 3D and NX to better design and understand the forces they are working with.



WERC Environmental Design Competition

The success of last year's WERC team has attracted many to want to participate in the competition, so this year there are 2 teams! Both teams are working hard on researching and thinking of fundraising ideas to help them with their travel to New Mexico State University.



WERC Team 1

Eden is joining WERC team alum Morgan and Francine this year to create a wastewater treatment system for rural communities so they can reuse their water. Currently, rural communities utilize lagoons, so WERC team 1 is tasked with treating the lagoon effluent. The team is researching IFAS lagoons, slow sand filtration, trickling filtration and solar disinfection for treatment ideas.

WERC Team 2

Jake is leading the second WERC team with Clark, Allison and Averi. They are working on detecting and quantifying microplastics in reservoirs in real-time (30 minutes). Currently, the team is looking at using hydrocyclones to separate the algae from the microplastics then using microscopy and Image J to quantify the microplastics in the sample.



Senior Design Projects

Thomas, Liam, and Matt M. have started their senior design projects this semester.

If you are interested in any of the projects this year and would like to offer any insight please feel free to reach out to us!



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