

Great Lakes Student Conference

GENERAL INFO

Where: Milwaukee School of Engineering

When: Thurs. March 30th – Sun. April 2nd

Price to participate TBA

Competitions

- Concrete Canoe
- Steel Bridge
- Geotechnical Design
- Materials Design
- Environmental Design
- Mystery Design
- Quiz Bowl
- Technical Paper

Schedule

Thursday:

Team Registration
Canoe Captain Meeting
Bridge Captain Meeting

Friday:

Canoe
Geotech
Quiz Bowl

Saturday:

Bridge
Canoe Presentations
Environmental
Materials
Mystery
Business Meeting
Banquet

Sunday:

Return to UIUC

Who: Canoe team, Bridge captains, and Exec board are needed to come Thursday night. Board members and other competitors may come Friday or Thursday night. Everybody will return to UIUC on Sunday morning.

OFFICIAL WEBSITE: <http://asceglsc.org>

Competition Information

 (Complete set of rules are posted on the MSOE official website)

Concrete Canoe – Only those who are official concrete canoe members may participate in this competition.

Steel Bridge – Only those who are official steel bridge members may participate in this competition.

Geotechnical Design – The goal of the competition is to build a cost-effective paper retaining wall out of the materials that can support the self-weight of the soil and an applied load of 100 pounds. Teams will design and construct the paper retaining wall in the wooden box provided. When completed, one side of the plywood box will be removed leaving the paper retaining wall to support the weight of the soil and the applied load. As in all real life civil engineering applications, cost is the primary factor and scoring will be based on the quantity of materials purchased.

Participation in this competition will require students to work in a team up to 4 members, one of which must be a freshman. This competition will require no physical preparations prior to conference, but competitors will be required to meet with their team before the event to create a plan of action. Practice and research prior to competition is highly recommended.

The retaining wall will be composed of play sand, printer paper, paper towels, and toilet paper.

Materials Design – Create a foam concrete mix that will have a low thermal conductivity and density while also maintaining a high compressive strength.

Participation in this competition will involve working with a team of students (number of participants unlimited) to create several test samples of foam concrete in the months leading up to the conference. At conference, you will then bring those test samples in for compression and thermal insulation testing.

Environmental Design - Each team must construct a liner to prevent leachate infiltration from their simulated landfill. Each team will be provided a box that simulates the landfill; to which they will apply and test their liner. Teams will be graded on the effectiveness and economy of their design.

Participation in this competition will require students to work in a team up to 5 members. This competition will require no physical preparations prior to conference, but competitors will be required to meet with their team before the event to create a plan of action. Practice and research prior to competition is highly recommended.

The liners will be composed of: Pre-Wetted Paper Strips, Pieces of Plastic Bags, Pre-Wetted Fabrics, Popsicle Sticks, Cotton Pads, Bendy Straws, Playing Cards, Pipe cleaners.

Mystery Design – The mystery design competition is typically a design competition like what we have done for outreach events. It will likely involve building a structure that is the tallest, strongest, etc. with whatever given materials are provided. The official rules will be announced at conference.

This competition will likely include 4-5 students of any age range. It will require no preparation before conference.

Quiz Bowl – This event is essentially Jeopardy with FE exam style questions. The competition is broken up into two rounds. In the first round all teams in the competition will be randomly broken into four different groups. The top team from each of the first-round games will advance to the second round of the competition.

MSOE will provide a lock-out buzzer system for the participants to use during the competition.

This competition will involve a team of four that contains at least two underclassmen (Fr. or So.) and one female. It will be expected that the participants prepare for the competition by practicing FE exam questions but other than that will require no other preparations before conference.

Technical Paper – The participant will write and submit a paper based on the 2017 Daniel W. Mead Technical Writing competition prompt. There will be a presentation given by the participant during the competition that will summarize their response to the prompt. MSOE will provide access to a computer, wireless presentation remote, and a projector during their presentation.

The topic of the paper is “Is it ethical for university engineering faculty to teach technical subject matter to engineering students without obtaining professional licensure?”

To compete in this competition, an undergraduate student must write their technical paper prior to the competition and be prepared to present the paper at conference. The paper must not exceed 2,000 words in length and the presentation must be 6-8 minutes long. A 3-4 minute Q&A session will follow the presentation.