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SCHOOLS COMPETING

Bradley University
Illinois Institute of Technology
Indiana University - Purdue University - Fort Wayne
Marquette University
Milwaukee School of Engineering
Northwestern University
Purdue University - Calumet
Purdue University - West Lafayette
Rose-Hulman Institute of Technology
Trine University
University of Evansville
University of Illinois at Chicago
University of Illinois at Urbana-Champaign
University of Notre Dame
University of Southern Indiana
University of Wisconsin - Madison
University of Wisconsin - Milwaukee
Valparaiso University
2015 ASCE GLC EVENT SCHEDULE

Thursday, April 16, 2015
Team Check-In.............................................................6:30 pm - 8:00 pm .......Stinson Remick Hall
Concrete Canoe Captain’s Meeting...............................8:00 pm - 9:00 pm .......Stinson Remick Hall

Friday, April 17, 2015
Concrete Canoe Unloading...........................................6:30 am - 8:00 am .........St. Mary’s Lake
Breakfast........................................................................7:00 am - 8:00 am ..........St. Mary’s Lake
Concrete Canoe - Judging..............................................8:00 am - 9:30 am ........St. Mary’s Lake
Concrete Canoe - Swamp Testing.................................9:30 am - 11:00 am ..........St. Mary’s Lake
Materials Competition................................................10:00 am - 2:00 pm ..........112 Cushing Hall
Surveying Competition...............................................10:30 am - 4:00 pm ..........St. Mary’s Lake
Concrete Canoe - Endurance........................................11:00 am - 2:00 pm ..........St. Mary’s Lake
Lunch ...........................................................................12:00 pm - 1:00 pm ......St. Mary’s Lake
Concrete Canoe - Sprint Races.................................2:30 pm - 5:00 pm ..........St. Mary’s Lake
Steel Bridge Captain’s Meeting.................................7:00 pm - 8:00 pm ........Stinson Remick Hall

Saturday, April 18, 2015
Steel Bridge Team Unloading.......................................6:30 am - 8:00 am ..........Compton Family Ice Arena
Breakfast........................................................................7:00 am - 8:00 am ..........Compton Family Ice Arena
Concrete Canoe Presentation.......................................8:00 am - 1:00 pm ..........Carey Auditorium
Environmental Competition/Presentation..................8:00 am - 12:00 pm ........212 Stinson Remick Hall
Technical Paper Presentation......................................8:00 am - 12:30 pm ........109-110 Stinson Remick Hall
Steel Bridge - Aesthetics .............................................8:00 am - 9:00 am ..........Compton Family Ice Arena
Steel Bridge - Competition Runs...............................9:00 am - 5:00 pm ..........Compton Family Ice Arena
Lunch ...........................................................................12:00 pm - 1:00 pm ......Compton Family Ice Arena
Mini Career Fair........................................................12:00 pm - 2:00 pm ..........Compton Concourse
Quiz Bowl Competition...............................................2:00 pm - 4:00 pm ..........Carey Auditorium
Mystery Design Competition......................................2:00 pm - 3:30 pm ........Compton Family Ice Arena
Business Meeting.......................................................5:00 pm - 6:00 pm ..........Carey Auditorium

Sunday, April 19, 2015
Great Lakes Conference Brunch..........................10:00 am - 12:00 pm.......Joyce Center Concourse

Disclaimer: This schedule provided in this program are subject to change. They are provided in an attempt to aid in planning when to get to certain locations in order to compete, spectate or attend for whatever reason. Should the events be significantly delayed, that information will be posted on our Twitter feed and Facebook page. It should be expected that event times may change slightly so arriving early is highly recommended. More descriptive schedules are provided per event on the following pages; however, this disclaimer also applies.
ABOUT CONCRETE CANOE

Each year, engineering students from across the nation and beyond design and build a canoe using concrete as the principle building material. The project provides students with a practical application of the engineering principles they gain in the classroom, along with important team and project management skills that will be beneficial to their future careers. Each spring, students represent their schools in the ASCE Regional Conference Concrete Canoe Competition. The event challenges the students’ knowledge, creativity and stamina, while showcasing the versatility and durability of concrete as a building material.

This year, the Great Lakes Regional Conference Concrete Canoe Competition will be held on Saint Mary’s Lake on the campus of the University of Notre Dame. For location details, please see the maps on the following pages.

During the competition, teams are judged on various categories that combine to produce their overall score. Twenty-five percent of each team’s total score is based on the engineering design and construction principles used in the creation of their concrete canoe; 25 percent is based on a technical design report detailing the planning, development, testing, and construction of their canoe; and 25 percent is based on a formal business presentation highlighting the canoe’s design, construction, racing ability, and other innovative features. The remaining 25 percent of each team’s score is based on the performance of the canoe and the paddlers in five different race events: men’s and women’s slalom/endurance races, and men’s, women’s, and co-ed sprint races.
# ENDURANCE RACE SCHEDULE

## MEN

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<td>Indiana University - Purdue University - Fort Wayne</td>
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SPRINT RACE SCHEDULE

MEN
HEAT 1.............2:30 pm ..........Marquette University
University of Southern Indiana
Bradley University
University of Illinois at Urbana-Champaign
HEAT 2.............2:40 pm ..........Northwestern University
University of Notre Dame
Purdue University - Calumet
Illinois Institute of Technology
HEAT 3.............2:50 pm ..........Rose-Hulman Institute of Technology
University of Wisconsin - Madison
Trine University
University of Evansville
HEAT 4.............3:00 pm ..........University of Illinois at Chicago
Milwaukee School of Engineering
Valparaiso University
HEAT 5.............3:10 pm ..........Purdue University
University of Wisconsin - Milwaukee
Indiana University - Purdue University - Fort Wayne

WOMEN
HEAT 1.............3:20 pm ..........Marquette University
University of Southern Indiana
Bradley University
University of Illinois - Urbana Champaign
HEAT 2.............3:30 pm ..........Northwestern University
University of Notre Dame
Purdue University - Calumet
Illinois Institute of Technology
HEAT 3.............3:40 pm ..........Rose-Hulman Institute of Technology
University of Wisconsin - Madison
Trine University
University of Evansville
HEAT 4.............3:50 pm ..........University of Illinois at Chicago
Milwaukee School of Engineering
Valparaiso University
HEAT 5.............4:00 pm ..........Purdue University
University of Wisconsin - Milwaukee
Indiana University - Purdue University - Fort Wayne
SPRINT RACE SCHEDULE

CO-ED

HEAT 1.............4:10 pm ..........Marquette University
University of Southern Indiana
Bradley University
University of Illinois at Urbana-Champaign

HEAT 2.............4:20 pm ..........Northwestern University
University of Notre Dame
Purdue University - Calumet
Illinois Institute of Technology

HEAT 3.............4:30 pm ..........Rose-Hulman Institute of Technology
University of Wisconsin - Madison
Trine University
University of Evansville

HEAT 4.............4:40 pm ..........University of Illinois at Chicago
Milwaukee School of Engineering
Valparaiso University

HEAT 5.............4:50 pm ..........Purdue University
University of Wisconsin - Milwaukee
Indiana University - Purdue University - Fort Wayne
PRESENTATION SCHEDULE

8:00 am ..........Northwestern University
8:15 am ..........Trine University
8:30 am ..........Rose-Hulman Institute of Technology
8:45 am ..........University of Wisconsin - Milwaukee
9:00 am ..........Valparaiso University
9:15 am ..........University of Southern Indiana
9:30 am ..........Illinois Institute of Technology
9:45 am ..........University of Evansville
10:00 am ........BREAK
10:15 am ..........University of Illinois at Urbana-Champaign
10:30 am ..........University of Wisconsin - Madison
10:45 am ..........Purdue University - Calumet
11:00 am ..........Marquette University
11:15 am ..........Purdue University
11:30 am ..........University of Notre Dame
11:45 am ..........University of Illinois at Chicago
12:00 pm ........BREAK
12:15 pm ..........Milwaukee School of Engineering
12:30 pm ..........Indiana University-Purdue University Fort Wayne
12:45 pm ..........Bradley University
CONCRETE CANOE MAPS

COMPETITION LOCATION - St. Mary’s Lake

Displays & Staging
Racing Course
Viewing Area
D6 Parking Lot
ABOUT STEEL BRIDGE

For the Steel Bridge Competition, teams construct steel bridges for time under national guidelines. After construction, bridges are weighed and loaded laterally. After successfully completing these tasks, the bridges are loaded with 2500 lb, and deflections are measured. Teams are judged based on display, construction speed, lightness, stiffness, construction economy, structural efficiency, and overall performance.

The Great Lakes Regional Conference Steel Bridge Competition will be held in Compton Family Ice Arena on the south side of campus. Compton is located off of Edison Road via Joyce Drive. The following map provides a more exact location.

For the competitors, unloading begins at 6:30am and aesthetics judging begins at 8:00am. Competition runs will begin promptly at 9:00am, and continue throughout the day. Lunch will be served from 11:30am to 1:30pm. A more detailed schedule will be handed out at the Captain’s Meeting.

If you have any questions, feel free to any of the head volunteers.

Good luck, and enjoy the competition!

Schedule of Events:
6:30 am: Teams unload at Leahy Dr. entrance (look for signs)
7:00 am: Captains meeting
8:00 am: Aesthetics judging
9:00 am: Start first run
11:30 am - 1:30pm: Lunch served
12:00 pm - 2:00pm: Networking Fair
RUN SCHEDULE

This schedule is **tentative**. Should a school finish early, the next team will start immediately. Please be prepared for your run when the team before you begins construction. The first two teams will be called to the construction area at 8:45am.

9:00 am....................Valparaiso University
9:30 am....................Milwaukee School of Engineering
10:00 am.................University of Wisconsin - Madison
10:30 am...............University of Notre Dame
11:00 am...............University of Illinois at Chicago
11:30 am...............Purdue University - West Lafayette
12:00 pm...............BREAK
12:30 pm...........University of Illinois at Urbana-Champaign
1:00 pm...............Marquette University
1:30 pm...............Bradley University
2:00 pm...............Trine University
2:30 pm...............Rose-Hulman Institute of Technology
3:00 pm...............University of Evansville
3:30 pm...............Northwestern University
4:00 pm...............University of Wisconsin - Milwaukee
4:30 pm...............Indiana University - Purdue University - Fort Wayne
5:00 pm...............Purdue University - Calumet
5:30 pm...............Illinois Institute of Technology
STEEL BRIDGE MAP

Compton Family Ice Arena

Notre Dame Stadium Construction Zone

C1 Parking Lot

Compton Family Ice Arena Entrance

Unloading Dock
ABOUT THE SURVEYING COMPETITION

The surveying competition tests students on basic surveying and teamwork skills. The event will take place around St. Mary’s lake near the concrete canoe competition.

This year’s competition consist of two events. The first event is pacing, which requires each team member to pace out a given distance. This competition is scored based on accuracy and speed. The second event is differential leveling, which requires teams to find the elevation of a given point using a level, leveling rod, and standard surveying practices. Scoring for this event is based on accuracy, speed, and quality of field notes. Teams can earn a possible 17 points from the surveying event and a possible 23 points from the differential leveling event.

RUN SCHEDULE: PACING

10:30 am....................Indiana University - Purdue University - Fort Wayne
10:45 am....................University of Notre Dame
11:00 am....................Rose-Hulman Institute of Technology
11:15 am....................Trine University
11:30 am....................University of Wisconsin - Milwaukee
11:45 am....................Bradley University
12:00 pm....................University of Illinois at Urbana-Champaign
12:15 pm....................Marquette University
12:30 pm....................Valparaiso University
12:45 pm....................Milwaukee School of Engineering
1:00 pm....................University of Illinois at Chicago
1:15 pm....................Illinois Institute of Technology
1:30 pm....................University of Wisconsin - Madison
1:45 pm....................Purdue University - West Lafayette
2:00 pm....................Northwestern University
2:15 pm....................University of Evansville
2:30 pm....................Purdue University - Calumet
RUN SCHEDULE: LEVELING

10:30 am .......... University of Illinois at Chicago
10:45 am .......... Illinois Institute of Technology
11:00 am .......... University of Wisconsin - Madison
11:15 am .......... Pudue University - West Lafayette
11:30 am .......... Northwestern University
11:45 pm .......... University of Evansville
12:00 pm .......... Pudue University - Calumet
12:15 pm .......... Indiana University - Purdue University - Fort Wayne
12:30 pm .......... University of Notre Dame
12:45 pm .......... Rose-Hulman Institute of Technology
1:00 pm .......... Trine University
1:15 pm .......... University of Wisconsin - Milwaukee
1:30 pm .......... Bradley University
1:45 pm .......... University of Illinois at Urbana-Champaign
2:00 pm .......... Marquette University
2:15 pm .......... Valparaiso University
2:30 pm .......... Milwaukee School of Engineering

SURVEYING MAP

St. Mary’s Lake
The Materials Competition will be held on Friday, April 17, at 10:00 a.m. in the Materials Lab in Cushing Hall. In this competition teams will test the compressive strength and stiffness of the concrete cylinders they have designed and cast. Each cylinder will have all coarse aggregate replaced with recycled material. The cementitious material may also be replaced with recycled material, depending on the mix design. Each team will receive points as to where they ranked in each of the following average calculations between the two cylinders: stiffness to weight ratio, the strength to weight ratio, and the volume of recycled materials to volume of the cylinder.

All competition results will be tweeted on the Conference twitter account. Schools will test their cylinders according to the following schedule:

**RUN SCHEDULE**

**Heat 1 - 10:00 am**
- University of Illinois at Chicago
- Indiana University - Purdue University- Fort Wayne
- Milwaukee School of Engineering
- Purdue University - West Lafayette
- Trine University
- University of Wisconsin - Milwaukee

**Heat 2 - 11:00 am**
- University of Evansville
- Illinois Institute of Technology
- Northwestern University
- Purdue University Calumet
- Valparaiso University
- University of Wisconsin - Madison

**Heat 3 - 1:00 pm**
- Bradley University
- University of Illinois at Urbana-Champaign
- Marquette University
- Rose-Hulman Institute of Technology
- University of Notre Dame
MATERIALS COMPETITION MAP

Cushing Hall
ABOUT THE ENVIRONMENTAL COMPETITION

Teams will design and assemble water filters with various filter media unknown to competitors until competition time. There will also be a cost associated with each filter media. The objective of the competition is to design a filter that filters the highest amount of water volume with the lowest amount of turbidity, natural organic matter, and total dissolved solids. Additionally, each team will be scored on the cost of their filter.

**Note to participating teams:** Please arrive 15 minutes early to the site to sign in so that we can start each heat on time. Thank you.

**Note to spectators:** No spectators from each school will be allowed in the competition area until their school has competed due to the mystery of the filter media to make it fair for each team.

**RUN SCHEDULE**

Heat 1 - 8:00 am
- University of Evansville
- University of Notre Dame
- Rose Hulman Institute of Technology
- Trine University
- University of Wisconsin - Milwaukee

Heat 2 - 9:00 am
- Bradley University
- University of Illinois at Urbana-Champaign
- University of Marquette
- Valparaiso University

Heat 3 - 10:00 am
- Milwaukee School of Engineering
- University of Illinois Chicago
- Illinois Institute of Technology
- University of Wisconsin - Madison

Heat 4 - 11:00 am
- Purdue University
- Northwestern University
- Indiana University - Purdue University - Fort Wayne
- University of Purdue - Calumet
ENVIRONMENTAL MAP

Stinson Remick Hall

Notre Dame Stadium Construction Zone

Entrance

C1 Parking Lot
ABOUT THE MYSTERY DESIGN COMPETITION

Details regarding the mystery design challenge will be distributed to each team during check-in. The competition will take approximately half an hour, and all schools will compete simultaneously in the Compton Family Ice Arena. There is not a limit to how many team members may participate. Judging will occur immediately after the competition is complete. The results will be tweeted as soon as they are determined. Please see a member of our volunteer staff if you have any questions. Good luck!
MYSTERY DESIGN MAP

Compton Family Ice Arena

Notre Dame Stadium Construction Zone

C1 Parking Lot

Compton Family Ice Arena Entrance

Unloading Dock
ABOUT THE TECHNICAL PAPER

Established in 1939 in honor of the 67th President of the American Society of Civil Engineers, the Daniel W. Mead Competition, known as the Technical Paper Competition, provides an opportunity for aspiring civil engineers to enhance their understanding of the ethical implications of their future professions, further their professional development, and potentially gain national attention.

This year, the topic, as determined by the national ASCE organization, is, “Should the Engineer of Record (who has sealed a set of plans) be held responsible, to any degree, for injury or death to builders or bystanders that occurs during the construction of his/her design?”

Each school is allowed to send one representative to compose a Technical Paper and present it to a panel of judges, who are professional and well-seasoned engineers.

RUN SCHEDULE

8:00 am ..................Purdue University
8:15 am ...............Trine University
8:30 am ....................University of Evansville
8:45 am ...............Northwestern University
9:00 am ...............Valparaiso University
9:15 am ....................Indiana University - Purdue University - Fort Wayne
9:30 am ...............Bradley University
9:45 am ....................University of Wisconsin - Madison
10:00 am ...............University of Illinois at Urbana-Champaign
10:15 am ...............Illinois Institute of Technology
10:30 am ...............University of Illinois at Chicago
10:45 am ...............Milwaukee School of Engineering
11:00 am ...............Marquette University
11:15 am ...............University of Notre Dame
11:30 am ...............Rose-Hulman Institute of Technology
11:45 am ...............University of Wisconsin - Milwaukee
TECHNICAL PAPER MAP

Stinson Remick Hall
ABOUT THE QUIZ BOWL

The Quiz Bowl Competition allows students to test their civil engineering knowledge in a fun and competitive environment. Modeled after many collegiate academic competition programs the Quiz Bowl Competition will be played in a team Jeopardy format where many minds will work to uncover the correct answer. Teams of up to four undergraduate students will compete for the title of champion during three rounds of competition. Topics for questions may cover everything from statics to geotechnical to transportation to civil engineering history to fluid mechanics and even some wild card questions. This year’s Quiz Bowl Competition will combine a group stage with head-to-head competition to give more teams more opportunities to play and to more thoroughly determine the champion.

Spectators are welcome! We ask that spectators remain observant and respectful during competitions, do not discuss questions in common areas after each competition, and hold any show of appreciation until the end of competition. Schools are encouraged to have students mentally play along with each question but we ask that there is no conferring amongst students while competition is live. Challenges to any answer must be made by the team in play and not by a member of the audience.

No previous experience is needed. All that is required is a willingness to learn about a broad knowledge of civil engineering topics, a fun and competitive attitude, team focus, and school spirit.
QUIZ BOWL MAP

Carey Auditorium
MAPS

St. Mary’s Lake

Compton Family Ice Arena
THURSDAY
Team Check-In: Use C1 Parking Lot
Concrete Canoe Meeting: Use C1 Parking Lot

FRIDAY
Concrete Canoe: Use D6 Parking Lot
Surveying Competition: Use D6 Parking Lot
Materials Competition: Use D6 Parking Lot
Mystery Design: Use C1 Parking Lot

SATURDAY
Steel Bridge: Use C1 Parking Lot
Concrete Canoe Presentations: Use Library Parking Lot or Bulla Parking Lot
Quiz Bowl Competition: Use Library Parking Lot or Bulla Parking Lot
Environmental Competition: Use C1 Parking Lot
Technical Paper Competition: Use C1 Parking Lot
Mini-Career Fair: Use C1 Parking Lot
Business Meeting: Use Library Parking Lot or Bulla Parking Lot

SUNDAY
Closing Brunch: Use C1 Parking Lot
For Shamrock and Claddagh Sponsors, please see the conference website.