Schedule of Events

Thursday, March 31

Registration/Dinner 7:00pm Doubletree
Welcome Meeting 8:00pm Doubletree
Concrete Canoe Captain Meeting 8:30pm Doubletree

Friday, April 1

Concrete Canoe Unloading/Breakfast 6:00am Veterans Park
Captains Meeting 7:30am Veterans Park
Aesthetics & Adherence to Design Criteria 8:00am Veterans Park
Swamp Testing 8:30am Veterans Park
Races Begin 9:30am Veterans Park
Surveying Competition 10:00am Veterans Park
Lunch 11:30am Veterans Park
Final Product Display 11:30am Veterans Park
Races Continue 1:00pm Veterans Park
Final Product Durability 5:30pm Veterans Park
Steel Bridge Captains Meeting 7:00pm Klotsche Arena

Saturday, April 2

Steel Bridge Unload & Setup/Breakfast 6:30am - 7:00am Klotsche Arena
Steel Bridge Aesthetics Judging 8:00am Klotsche Arena
Technical Paper Presentations 8:00am Union-Firside Lounge
Steel Bridge Construction 8:30am Klotsche Arena
Concrete Canoe Presentations 9:00am Union-Wisconsin Room
Enviornmental Competition 11:00am Union-Ballroom
Lunch 12:00pm Union-Gasthaus
Geotechnical Competition 12:30pm Union-Ballroom
Mystery Design 2:00pm Union-Ballroom
Business Meeting 4:00pm Union-191
Awards Banquet 6:00pm Italian Conference Center

Contact:

Chad Shihata
2011 ASCE Student Conference Chair
(608) 412-2423
cshihata@uwm.edu
## Concrete Canoe

### Schedule

**Thursday, March 31**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Canoe Captains Meeting</td>
<td>8:30pm</td>
<td>Doubletree</td>
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**Friday, April 1**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Canoe Unloading/Breakfast</td>
<td>6:00am</td>
<td>Veterans Park</td>
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<tr>
<td>Quick Captains Meeting</td>
<td>~7:30am*</td>
<td>Veterans Park</td>
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<tr>
<td>Final Product – Aesthetics &amp; Adherence to Design Criteria</td>
<td>8:00am*</td>
<td>Veterans Park</td>
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<tr>
<td>Swamp Testing</td>
<td>8:30am*</td>
<td>Veterans Park</td>
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<tr>
<td>Races Begin – Slalom</td>
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<tr>
<td>Women’s</td>
<td>9:30am</td>
<td>Veterans Park</td>
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<tr>
<td>Men’s</td>
<td>10:30am</td>
<td>Veterans Park</td>
</tr>
<tr>
<td>Lunch</td>
<td>11:30am</td>
<td>Veterans Park</td>
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<tr>
<td>Final Product – Product Display</td>
<td>11:30am</td>
<td>Veterans Park</td>
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<tr>
<td>Races Continue – Sprint</td>
<td></td>
<td></td>
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<tr>
<td>Women’s Heat Races</td>
<td>1:00pm</td>
<td>Veterans Park</td>
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<tr>
<td>Men’s Heat Races</td>
<td>2:00pm*</td>
<td>Veterans Park</td>
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<tr>
<td>Co-ed Heat Races</td>
<td>3:00pm*</td>
<td>Veterans Park</td>
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<tr>
<td>Women’s Finale</td>
<td>4:00pm*</td>
<td>Veterans Park</td>
</tr>
<tr>
<td>Men’s Finale</td>
<td>4:30pm*</td>
<td>Veterans Park</td>
</tr>
<tr>
<td>Co-ed Finale</td>
<td>5:00pm*</td>
<td>Veterans Park</td>
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<tr>
<td>Final Product – Durability</td>
<td>5:30pm*</td>
<td>Veterans Park</td>
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**Saturday, April 2**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Oral Presentations Begin</td>
<td>9:00am</td>
<td>Union – Wisconsin Room</td>
</tr>
<tr>
<td>Lunch</td>
<td>Noon</td>
<td>Union</td>
</tr>
<tr>
<td>Oral Presentations Continue</td>
<td>1:00pm</td>
<td>Union – Wisconsin Room</td>
</tr>
</tbody>
</table>

* Will begin as quickly as possible once completion of prior event
Hotel to Concrete Canoe (Veterans Park)

**Doubletree Hotel Milwaukee City Center**
611 W. Wisconsin Avenue
Milwaukee, WI 53203

1. Head south on N 6th St toward W Michigan St
   - 279 ft

2. Take the 1st left onto W Michigan St
   - 1.0 mi

3. Turn left at N Lincoln Memorial Dr
   - 1.1 mi

4. Turn right at E Lagoon Dr
   - 0.3 mi

E Lagoon Dr
Veterans Park

Parking is allowed all along E. Lagoon Dr. and there is additional parking in lots shown above. Trailers please park in furthest lot indicated above.
There will be a tent to set up team Product Displays.
The 600m Slalom/Endurance course will start at indicated line and head northeast through slalom buoys. Once slalom buoys have been negotiated, teams will head for the blue buoys starting with the most easterly and working counter clockwise. Teams will finish when they cross the finish line at the green buoy.

The 200m Sprint course will also start at indicated line and head southwest 100m. Lanes are as follows: Green-1, Blue – 2, Red – 3, Yellow – 4.
Oral Presentations will be held in the Wisconsin Room. There will be a prep area immediately entering the room before the presentation area.
Oral Presentation Layout
Surveying

Friday, April 1, 10:00am @ Veterans Park

Objective
The purpose of this competition is to test teams on basic surveying techniques, such as taping and pacing distances, measuring horizontal angles using a transit, and measuring elevations using a level.

Events
1. Pacing and Taping Distances
   • Each team will pace a distance between fixed points. After the team paces off the distance, the team will tape off the distance. All measurements and calculations must be recorded in a field book. Teams will be given a distance to pace and record in their field book. They will then use their tape to check the distance. The distance will be longer than the 100 ft tape therefore proper measures must be taken to obtain the correct adjusted distance.

2. Orienteering
   • Teams will be given a beginning bearing to setup on and a list of distances and azimuths. The team will have to traverse to all the points on the course to arrive at an end point. Place will be determined by accuracy to final point only in the set amount of time.

General Rules
1. Each school may enter one team with no more than three members and must provide their own equipment which should include the following:
   1. 100 ft. tape with or without reel
   2. Chaining pins or nails
   3. Tension handle
   4. Plumb bob
   5. One blank field books
   6. Non-programmable calculator
   7. Total Station with tripod
   8. Prism and prism pole
   9. Colored ribbon for pins or nails

2. Any other equipment may be brought except for programmable calculators or laptop computers.

3. No consultation with faculty, professional surveyors or engineers, or comparisons with other teams will be allowed.

4. Judges will have the right to disallow the use of any equipment that may give a team an unfair advantage.

Scoring
Each of the events rewards 50 points to first place, 30 points to second place, and 10 points for third place. Each event will have a maximum allowed time, and any team that does not complete the event within this allowed time limit will be disqualified from that specific event. Scoring and tie breakers are based first on accuracy then on time. The factor of time in the score will be based on the difference of the maximum time allowed and the time completed.
The pacing and taping portion will be done near the lake on the sidewalk indicated by the purple line. The orienteering portion will be done in the field on the east side of the street as indicated above.
# Steel Bridge

## Schedule

**Friday, April 1**

- Judges Meeting: 6:00pm Klotsche Arena
- Captains Meeting: 7:00pm Klotsche Arena

**Saturday, April 2**

- Bridge Unload/Breakfast: 6:30 - 7:00am Klotsche Arena
- Teams Setup Up Bridges for Display: 7:00am – 8:00am
- Display Judging: 8:00am Klotsche Arena
- Construction Prep: 8:30am Klotsche Arena
- Bridge Construction: 9:00am Klotsche Arena
- Lunch: 12:00pm
- Bridge Construction Continues: 12:30am Klotsche Arena
1. Head south on N 6th St toward W Michigan St
2. Take the 1st left onto W Michigan St
3. Turn left at N Lincoln Memorial Dr
4. Continue onto E Kenwood Blvd
5. Turn right at N Downer Ave

N Downer Ave
Teams are responsible for finding parking. There is multiple parking structures around campus as indicated on the map above and also street parking.
Enter the Klotsche Center either through East Entrance if parking on street, Parking Structure if parking in structure, or West Entrance if coming from campus. Proceed to stairs located to left of information desk. Go left on second floor and enter into the Arena.

Spectators can find parking in parking structure or street parking around the facility.

*Building administration asks visitors not to wander throughout the facility since it is still open to UWM students and we are fortunate enough to share the space.*
Steel Bridge Team

Truck-Trailer vehicles will be parked in a secure lot located off of campus because of insufficient surface lot space. There will be a shuttle from the lot to the Klotsche Center in the morning but not in the afternoon. Teams are responsible for getting to their trucks throughout the day when done competing. Please plan accordingly and keep all tools that might be needed on site. Bridges will be carted in through rear service door labeled “Bridge Arena Entrance”, all other spectators and team members should enter through entrance given above.
Parking is in gated lot on North side of the University Research and Services Building. A UWM shuttle service (minivan) will bring the drivers back to the Klotsche Center in the morning. Once team’s trailer is parked please wait by entrance to building for pickup. When returning to pick up trailers the lot should be open if not there will be a security guard on site to open it.
Technical Paper

Saturday, April 2, 8:00am @ UWM Union – Fireside Lounge
Objective
Designing and supplying a pervious concrete specimen with excellent hydrocarbon trapping capacity.

General Rules
1. Provide one 6” x 12” cylinder for testing and judging.
2. Submit a sheet containing the following information for each cylinder entered at time of registration.
   - Name of school
   - Specimen number
   - Team Captain
   - Team member names
   - Casting date
   - Mix design including quantities
   - Faculty or Practitioner Advisor’s name and signature as verification that each entry conforms to the Environmental Competition Rules.
Failure to supply all requested information will result in disqualification from this competition.

Eligibility
The environmental team shall consist of no less than 1 and no more than 5 undergraduate members of the school ASCE student chapter. Each team shall designate a captain who shall be responsible for the participation of the team.

Product
Concrete cylinder shall be 6” x 11” cast in a standard 6” x 12” plastic cylinder mold. The cylinder mold shall have an open top, and a one-inch hole in the bottom to allow the water to drain out. The plastic cylinder molds shall be a minimum of 12 inches high, so that a minimum one-inch lip is maintained around the top. See Figure 1 for a sketch of dimensions. The mix design shall contain no organic material which could be subject to decomposition in an actual pavement. Examples of organic material include:
   - Wood or wood fiber (including paper)
   - Plant or animal fiber (including cotton and wool)
   - Carbon or charcoal

Execution
Prior to the Conference
Teams shall make the concrete sample at their home facilities and bring it with them to the Conference. Testing at your school shall be permitted and teams shall be permitted to experiment with several different concrete mixtures, however, the actual cylinder submitted for testing shall not have been previously exposed to oil.

The teams are responsible for having their cylinders registered with the judges no later than 30 minutes before the start of competition. A representative from each school must be present during the testing of each of that school’s specimens.

Testing
Each specimen shall be flushed with water prior to testing by the judges to ensure the cylinders are cleansed of ‘dissolving’ agents or other impurities other than the pervious concrete matrix.

Test 1
Each specimen shall have two quarts of water poured over it, which must percolate all the way through the specimen in under two minutes. If the specimen fails this test, it shall be disqualified.

Test 2
After Test 1, a measuring device shall be placed below each specimen. Each specimen shall be required to pass vegetable oil and water (0.5 quarts vegetable oil, 1.5 quarts water). The vegetable oil shall be poured through first by a judge, evenly, over the top, over a 20 second time frame. The water shall be poured immediately following by a team member. Each team shall have two minutes in which to pour all the water at a rate of their choosing. After an additional one minute, the measuring device shall be removed from under the specimen. The amount of vegetable oil collected in the measuring device shall be determined. The measuring device will be a graduated cylinder with the volume of oil floating on top as the metric.

Scoring
Scoring shall be based on the amount of oil retained in the specimen. The specimen which allows the least volume of oil to pass shall be declared to be the winner. Specimens which fail Test 1, but which do not violate the spirit of the competition shall be awarded participation points. Ties shall be broken as follows based on innovation in mix design, as determined by the judges. All decisions of the judges shall be final.
Geotechnical

Saturday, April 2, 12:30pm @ UWM Union – Ballroom

Objective
The objective of this competition is to create a model segment of a working floodwall using materials provided the day of the competition. The winning floodwall will be determined using a ratio of the amount of water restrained to the cost of the materials used to build the floodwall.

General Rules
For the purpose of the competition, “floodwall” is defined as any surface that holds back a pool of water. A floodwall’s “strength” will be defined as the measured amount of water it is able to hold back before it incurs failure. Failure of a floodwall will be deemed when the model houses in the designated area of the module are completely submerged.

Materials
Each team will be provided the following construction materials:
- Box-cutter
- Scissors
- Flashlight
- Latex Gloves (if desired)

Each team may purchase the following building materials:
- Clay (self-hardening pottery clay)
- Mesh Reinforcement (window screen 6” x X”)
- Balsa Wood (1/4” x 1/4” x X”)
- Wooden Dowels (6” x 1/4” diameter)

These materials may be “purchased” by any team member from the designated competition materials store.

Models
Teams must prebuild and bring their models to the event. Dimensions for the model are provided below. All dimensions are interior dimensions. Teams are free to build with material of their choosing but it must be of a smooth surface (grade BC plywood is suggested with B side in). Models should be painted with a waterproof latex paint and all seams or cracks between walls or floors sealed with a smooth layer of calk to ensure no leaking of water. 3 holes (1/4”diameter) can be drilled into the floor within the floodwall area at team’s discretion to place dowels upright. Holes are to be drilled 1/4” deep. Bottom of model should be built so as no water will drain through the 3 drilled holes. Model should display schools name.

Building Procedures
Teams are free to use their materials as they wish to build a floodwall that will protect the designated areas of the module from water. The floodwall may only be built out of the purchased materials (clay, mesh reinforcement, balsa wood, and dowels). The floodwall must be completed within a 90-minute time limit. The head judge will announce when time will begin and end. Floodwalls must be built within the designated area (hatched). Maximum of 6” wide and 16” max and min of 8” tall.

Testing
Since the floodwalls cannot be tested with water prior to being judged, teams may use the flashlights provided to test for weak points in their floodwalls. A cloth cover will be provided to hold on one side of the floodwall and light can be shinned from the other to look for holes in the wall. Floodwalls will be tested in the same location they are built in to avoid damage during transport.

Judgment
When a team deems that it has completed its construction of a floodwall, they may begin testing their floodwall once an available judge is present. Each team will pour water from jugs into their own floodwall module using a provided funnel. The judge will determine the failure of a floodwall when the model houses become completely submerged. Upon the floodwall’s failure, pouring of the water must cease immediately, and the remaining water will be weighed to determine how much water the floodwall held. All judge’s rulings are final.

If early in the pouring process the floodwall begins to leak, the team reserves the right to discontinue pouring and consider if an “emergency repair” is necessary and essential. If an “emergency repair” is to be conducted, the team will be penalized an emergency crew fee per minute of repair time. This additional cost is added to the total cost of the floodwall. Materials used for the “emergency repair” may only come from materials left over from original construction; no new materials may be purchased. During emergency repair session absolutely no water may be poured into the module.

Scoring
A team’s score will be based on a ratio between the strength of the floodwall and the cost of the materials used to build it.

A floodwall that holds back an adequate amount of water with respect to actual floodwall proportions, will receive a full strength score of 100. The amount of water necessary to flood the model house without the floodwall’s presence would equate to a strength score of zero. The amount of water a floodwall module holds after a failure will determine a strength score based on a linear function between the two above scores. Strength scores of over 100 are possible.

The cost of a team’s floodwall will be based on the materials the team has purchased and any additional costs resulting from emergency repairs. The judges will tally this cost throughout the competition.

A special ratio will combine the strength and cost scores to make a final floodwall score. This ratio, as seen on the scoring sheet, comprises of the strength over the cost of the floodwall including the costs associated with an early failure.

The competition staff will compute each team’s score based on the above criteria. The team will be allowed to verify that this result is correct. Any disagreement over the results must be discussed with the head judge immediately. The head judge’s decision is final.
**Problem**

Your problem is to design a method, device, mechanism, structure, or support system for one egg. The egg must be suspended and projected from a wall which must be perpendicular to the floor. The goal is to keep the egg suspended for at least 30 seconds.

*4 team members  
*Support for the egg may not be attached to the ceiling.  
Your solution will be constructed from 2 sheets of 8 ½ x 11 bond paper. This is the only paper to be used in your solution. One 4ft. piece of string and 12 inches of scotch tape will also be provided.  
*You must only use the materials provided by the instructor. There will be no other material provided for attaching your structure to the wall.  
*Teams will have 30min to construct system.  
*Egg may be supported by team until judge is ready to score their system.  
*Winner is determined by team that supports the egg for full 30 seconds furthest away from the wall.
Business Meeting

Saturday, April 2, 4:00pm @ UWM Union – Room 191

The Executive Committee, members of which are empowered by their respective Chapter’s members to vote for that Chapter, shall meet at an Executive Meeting during each Annual Conference for the purpose of selecting the host Chapter for the next succeeding conference, of acting on applications for membership, and of transacting any other business brought before it.
Awards Banquet

Saturday, April 2, 5:30pm @ Italian Community Center

Saturday, April 2

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<thead>
<tr>
<th>Event</th>
<th>Time</th>
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<tbody>
<tr>
<td>Doors Open</td>
<td>5:30pm</td>
<td>Italian Conference Center</td>
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<tr>
<td>Mingle/Cash Bar</td>
<td>5:30pm-6:45pm</td>
<td>Italian Conference Center</td>
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<tr>
<td>Welcome Speech</td>
<td>6:45pm</td>
<td>Italian Conference Center</td>
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<tr>
<td>Dinner</td>
<td>7:00pm</td>
<td>Italian Conference Center</td>
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<tr>
<td>Present Awards</td>
<td>8:00pm</td>
<td>Italian Conference Center</td>
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As there will be a bar at the awards dinner please plan accordingly to get home safely.

Milwaukee Taxi Cab Companies:

American United Taxi Cab
(414) 220-5000

Yellow Cab Co-Op
(414) 271-1800
Hotel to Awards Banquet (Italian Conference Center)

Parking on South side of building off of N Jackson St.
Hotel to Truck-Trailer Parking

Parking passes will be handed out at check in.
Meals

Meals Provided by UW-Milwaukee: We will be providing some of the meals at the site of that day’s events

Thursday Registration Dinner- Pizza and Drinks
Friday Canoe Captains Breakfast – Bagels, Coffee, and Juice
Friday Lunch – Jimmy Johns Subs and Drinks
Saturday Bridge Captains – Bagels, Coffee, and Juice
Saturday Awards Dinner – Salad, Bread, Chicken Sara w/ Dutchess Potatoes, Eggplant Roulette w/ Angel Hair Pasta, Vienna Torte, Drinks

Meals Not Provided: On your own to eat wherever you heart desires, but we have lined up some convenient and discounted places

Friday Breakfast – Grab ‘n Go @ Doubletree Ballroom
Friday Dinner –
Saturday Breakfast - Grab ‘n Go @ Doubletree Ballroom
Saturday Lunch – Meal Specials @ UWM Gasthaus (campus restaurant and bar in Union)
Thank You Sponsors

*Doubetree Milwaukee City Center*  
*Redwall Screen Printing*  
*Trophy Athletic Supply Company*  
*Milwaukee County Parks*  
*Milwaukee Fire Department*  
*Juneau Park Paddleboats*  
*UW-Milwaukee College of Engineering and Applied Science*  
*Italian Community Center*