

2013 UNH SeaPerch Challenge

Here are the details so far! The timeline may change slightly, but this is a good rough estimate on how the day will go.

Date : Saturday, May 11, 2013

Location : University of New Hampshire, Durham.
Swasey Pool in the UNH Field House, and the Chase Ocean Engineering Building

Registration Fee per team: \$20 (Please make a check out to "UNH Cooperative Extension")

Team: Each team can consist of one coach, and up to 5 team members. Each team can have one SeaPerch compete in the Salvage Course and one in the Obstacle Course.

Lunch: Lunch will be provided to registered teams and volunteers for the event. We will provide a listing of dining options on campus for audience members. Snacks and food from home is also permitted to be eaten in the stands at the Swasey Pool and at Chase Ocean Engineering Laboratory.

Competition Portion of the Morning at the Swasey Pool

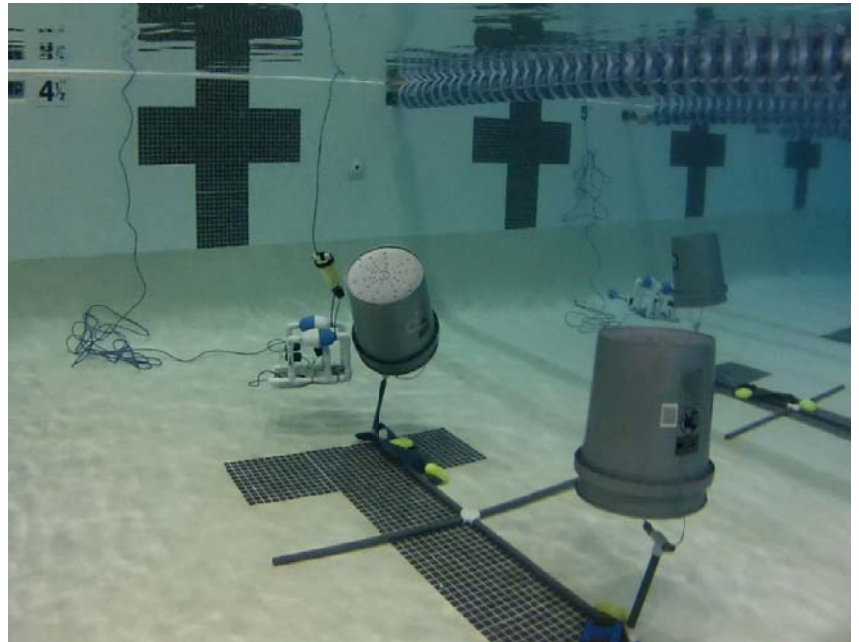
The competition is divided into two parts, the Obstacle Course and the Salvage Course. Competition starts at 9:00 am.

Each round is 30 minutes long. During the competition each team will compete in the Salvage course and the Obstacle course. During breaks you can work on your ROV's, or observe the competition.

Check-in - Before competing, each SeaPerch must go through an inspection. Please be prepared to discuss what modifications you have done to your SeaPerch with regards to the basic SeaPerch design, and how much those modifications cost.

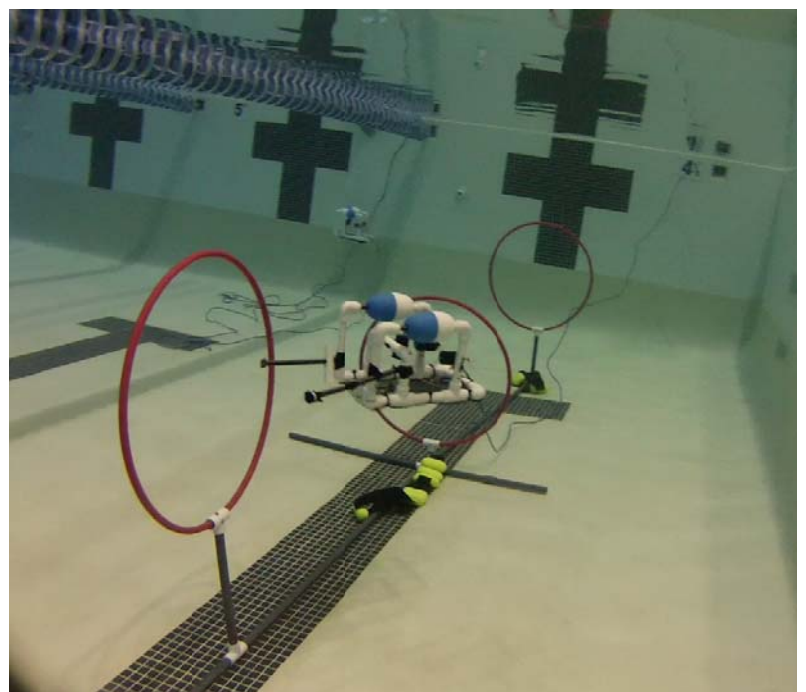


Salvage Course - In the salvage operation, teams have to remove "debris" in the form of weighted buckets from the bottom of the pool, float them to the surface, and then bring them to the side of the pool. Each bucket along the course is progressively heavier. You will have 15 minutes to run the salvage course. Timing for each step of the course will be marked (remove from base, break surface, and bring to side of pool) and the competition will be based on how many steps you have achieved in the time permitted.



If you need a diver in the pool to retrieve your ROV, then there is a 2 minute penalty and we will confirm with you before doing that. If other debris or the buckets stray into other lanes of the pool, then there is no penalty but a diver will be called quickly so as to not interfere with other ROV's. We will keep track of the timing of each stage of the event, and the teams will be ranked according to the highest level achieved in the shortest amount of time. (See attached score sheet for example). Floats in the form of sliced pool noodles will be provided to all participants, any other float mechanisms that you want to utilize during the salvage course must be verified during check-in, and cannot be smaller than a ping pong ball.

Obstacle Course - In the timed obstacle course event, teams will have to maneuver their ROV through a series of underwater hoops, bring your ROV to the surface of the pool, and then trace their steps back. You will have 15 minutes to compete up to two attempts on the course. Only one attempt will be submitted, so if your first attempt isn't going well, you may want to abort the attempt and start over. The time when you clear each hoop inbound and outbound will be recorded, and rankings will be



determined on the highest level achieved during the shortest time. If you need a diver in the pool to rescue your ROV then a 2 minute penalty will be assigned. Please see the score sheet as an example.

Competition Notes

Please note, you can modify your SeaPerch kit ROV with up to \$20 in modifications. You may however bring different ROV's to compete in each of the two events. Each ROV has a \$20 limit on modifications. All ROV's will need to be checked-in as you arrive.

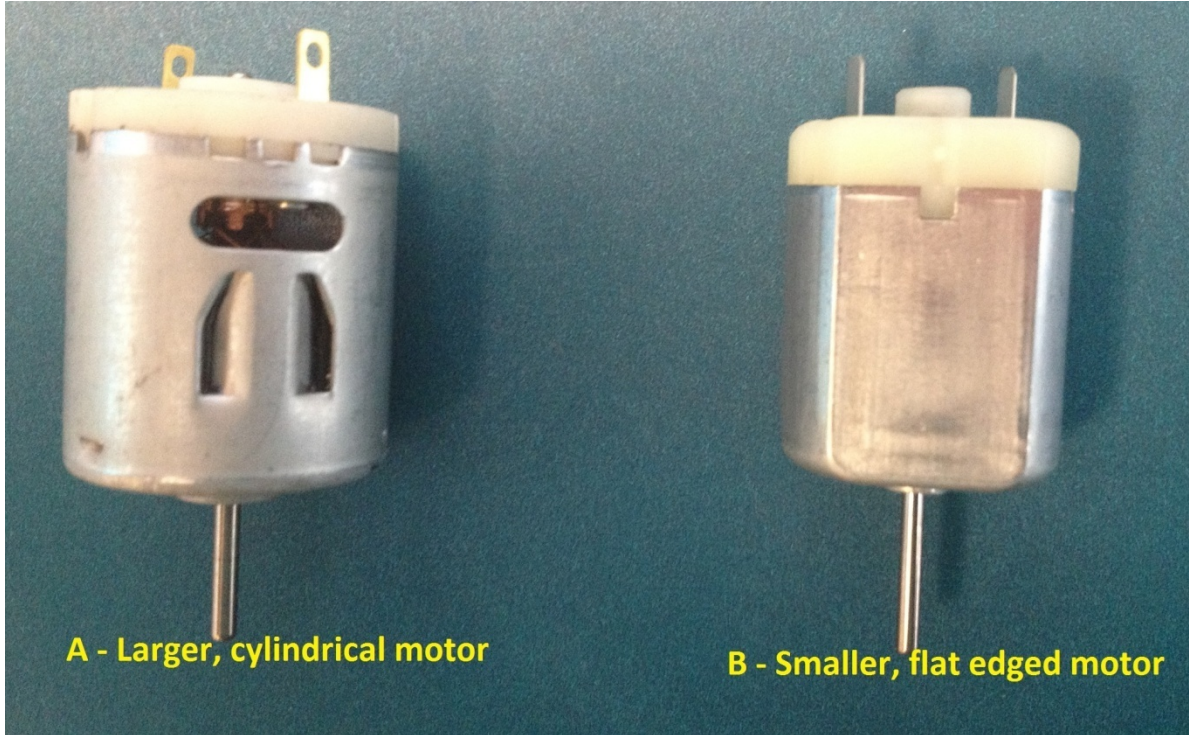
No more than 3 of the competition motors can be placed on your Sea Perch.

Only 2 members of the team can be at the pool while competing. The remaining team members and coaches must stay in the bleachers.

Work tables - We will have work tables and some supplies available for you to work on your ROV's and we will have some small cut up pool noodle floats, but please bring any other floats that you think you may want. The National competition lists that floats must be larger than 1.5" x 1.5" (basically bigger than a ping pong ball). So keep note of that when choosing your floats.

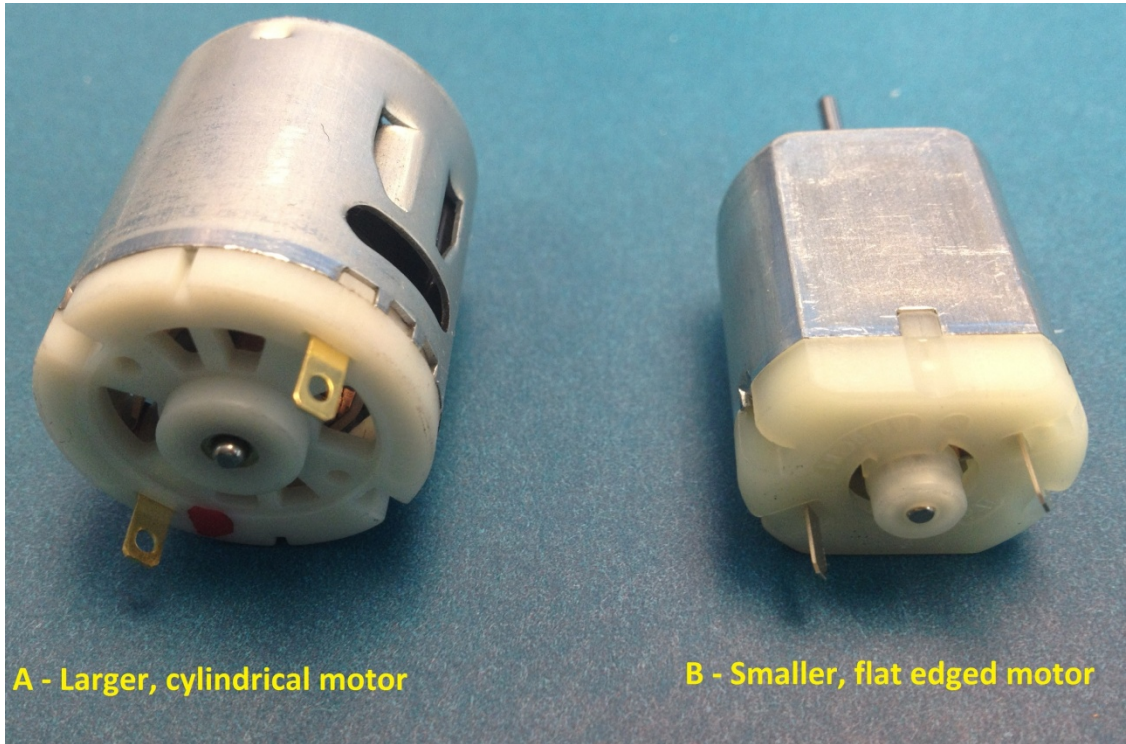
We will have batteries for your use while in the pool.

Issues with motors - We've noticed that two of the motors commonly used for building Sea Perch have different strengths, which would allow for faster propulsion for some Sea Perch. Because of this, we will have two categories of winners for each challenge. As you construct your ROV, please record which motor you are using, and include that in the registration form. (See photos below)



A - Larger, cylindrical motor

B - Smaller, flat edged motor



A - Larger, cylindrical motor

B - Smaller, flat edged motor

Notes about the Afternoon session at the Chase Ocean Engineering Building Tank

After lunch, we will have a surprise challenge for our competitors in our Engineering Tank of the Chase Ocean Engineering building. Just bring your SeaPerch, and we'll provide the tools needed to address this modern engineering challenge. This portion of the day is not a competition, but will be fun for all.

Following the Afternoon Challenge, we will have our awards ceremony, and then a tour of the Chase Ocean Engineering facility for all of those interested.

Location

Main competition will be held in the Swasey Pool, in the UNH Field House (Red star on map). Parking is free on the weekends, so park in one of the lots near Gregg Hall or Chase Ocean Engineering (zone in orange circle). To get to these parking zones, drive down College Road to South Drive, then go under the train bridge to Waterworks Road.

After the competition is over, we will head over to the Chase Ocean Engineering Lab (Yellow star) for lunch, and then for a collaborative surprise challenge for our participants in the Chase Engineering Tank, and a tour of the facilities.

