

Engineering Open House Competitions

http://www.eng.odu.edu/eng/openhouse/design_competitions.shtml

Team Olympics

Teams composed of three or more members will compete in several activities and the points awarded in each activity will be summed in order to determine the winning team. The activities include: Tallest Freestanding Building, Paper Airplane Toss, Orienteering, and Impromptu Competitions. These activities are described below.

Tallest Freestanding Building

Miscellaneous materials will be furnished to participants who will immediately have 20 minutes to create the tallest freestanding building possible.

Paper Airplane Toss

A sheet of 8 ½ by 11 in. copy paper will be furnished to participants who will immediately create an airplane which will be flight-tested for distance. Participants are encouraged to research, build, and test effective designs before the event. Pre-constructed entries will not be allowed.

Orienteering

A compass and a set of directions will be furnished to participants. Following the directions (distance and compass direction for each step in directions), participants will obtain clues at several un-manned stations and shortest elapsed time to complete the course will determine the winner.

Impromptu Competitions - Various Creative and Estimating Exercises

Awesome Amelia Earhart Challenge

Create a plane like object weighing less than 2 pounds, made completely out of the following waste materials: aluminum foil, 16-20 oz plastic bottles (including bottle cap), cardboard, popsicle sticks, and duct tape.

Baby Baja

The Baby Baja Rally is a competition that challenges high school students individually or as a team to build a miniature all-terrain vehicle capable of traversing sand dunes, water, and logs. This competition is intended to reward imagination, ingenuity and teamwork.

Egg Drop

Construct an apparatus that will allow an uncooked egg to survive a 25-foot freefall intact. The design of the apparatus should emphasize the mechanical principles of energy absorption. This competition is open to middle school and high school students.

Electric Boat

Participants will use their ingenuity to craft a boat from their own design. Each participant will be judged on how long it takes his/her boat to traverse the distance of a channel (approximately 10 feet). The boat with the fastest time will win. The racecourse will be a channel of at least 7 inches wide by 4 inches high by 12 inches long. Boats may be no wider than 6 inches. The depth of the water will be approximately 3 inches. There will be a separate competition for high schools and middle schools.

Model Span Bridge

The object of this contest is to construct a 12 inch long model bridge from a given amount of balsa wood. This model will be tested to destruction to determine its load-carrying capacity as related to its weight when subjected to a single loading. There will be separate competitions for high schools and middle schools.