EGG DROP COMPETITION GUIDELINES

GENERAL:

The contestants will design and build a shipping container that will prevent an uncooked chicken egg (Grade A Large) from breaking when dropped from an initial height of 15 meters.

At the discretion of the judges, surviving eggs will then be taken higher and dropped a second time. The container must be less than 800 cm3 in volume, with no single dimension longer than

25 cm. The maximum weight, including the egg, cannot exceed 1, 000 grams. Contestants must be able to remove the egg without damage.

MATERIALS:

Any material may be used in the design, as long as the structure meets the design and contest rules as outlined below.

DESIGN AND CONTEST RULES:

- **1.** All members of your team **MUST** be current UNF students and **ALL** members of the team must provide their UNF ID at the time of the competition
- 2. No kits or pre-made designs may be used. The structure must be the individual's invention.
- **3.** The structure must be completely released (no strings or other attachments) **NO PARACHTES!**
- **4.** The structure must land in a designated target area.
- **5.** No propulsion systems will be allowed.
- 6. No gases (eg. helium) other than air can be present in the structure when it is weighed.
- **7.** Volume will be calculated based on the shape of the container (inside air volume/space will not be subtracted out).

JUDGING:

- **1.** "Grade A Large" eggs will be supplied at the competition. You cannot bring your own egg.
- 2. All containers will be inspected by judges before they are dropped.
- **3.** Once an egg is weighed-in with the structure, that egg cannot be exchanged with another.
- **4.** The egg must be placed into the container on-site.
- 6. The egg must be undamaged after the drop in order for the score to be recorded.
- 7. The score will be based on the following equation:

 $S_{Final} = \frac{75S}{(W + L^2 + V)} - any \text{ point deductions}$ S = the success factor with values equal: A) S = 100 if egg does not break

Where:

- B) S = 50 if egg is damaged, but yolk is not exposed
- C) S = 1 if egg breaks
- **D)** W= Weight of container with egg (grams) (Cannot exceed 1,000 grams)
- E) L = Longest dimension (cm) (no dimension longer than 25 cm)
- **F)** V = Volume (cm³) (cannot exceed 800 cm³)

SFinal = TOTAL POINTS

- **8.** The containers will be dropped from an initial height of at least 15 meters. The second and final drops will be from a height greater than 15 meters.
- 9. The winner will be determined by the container with the greatest total score.

Note: Containers must meet volume requirements to compete.

EGG DROP COMPETITION Evaluation Worksheet

Team Name:						
Captain:						
Container Name:						
Group Members:						
Judge's Name:						
Judge's Name:						
Date:						
THIS SECTIO	ON TO BE COMPL	ETELD ONLY BY THE JUDGES				
L =	Longest Dimension (centimeters)					
V =	Volume (cm3)					
W =	Weight (grams)					
S =	100 points if egg does not break; 1 point if egg does break					
Point deductions for dama	aging the egg:	(50 points)				
S _{Final} =	$=\frac{75S}{(W+L^2+V)}$	– any point deductions				
SFinal =						
Dron #	1	Dron #2				

Drop # 1		Drop # 2			
Survival:	Yes	No	Survival:	Yes	No
Drop # 3			Drop # 4		
Survival:	Yes	No	Survival:	Yes	No