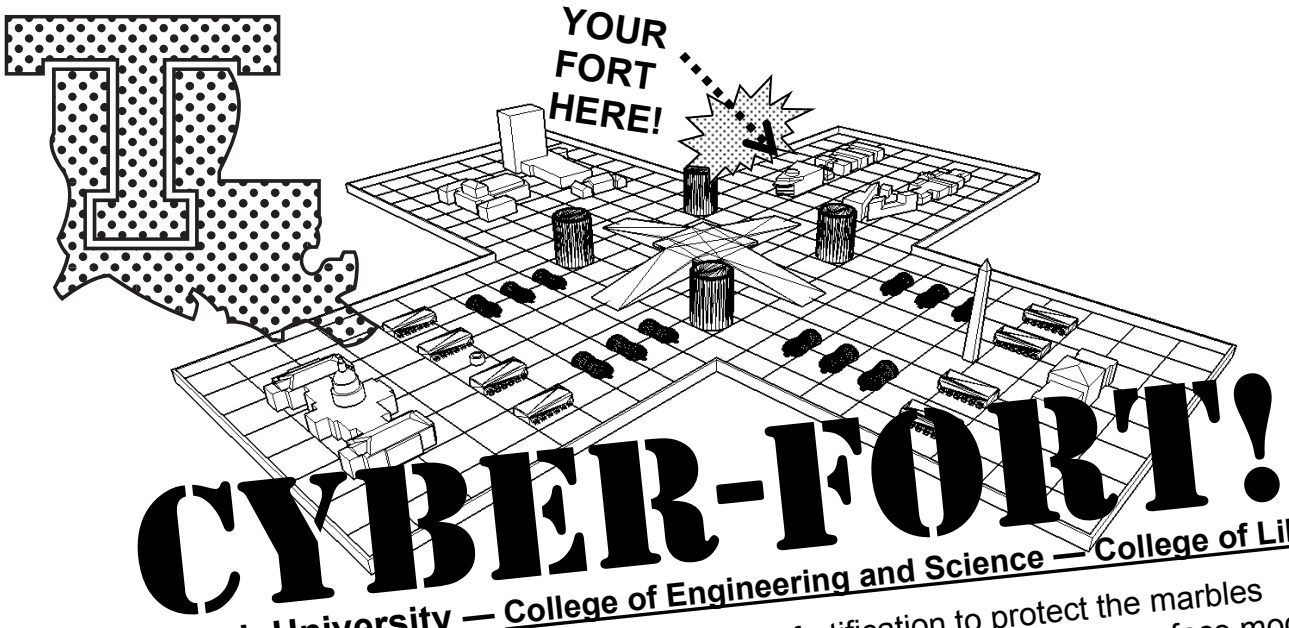
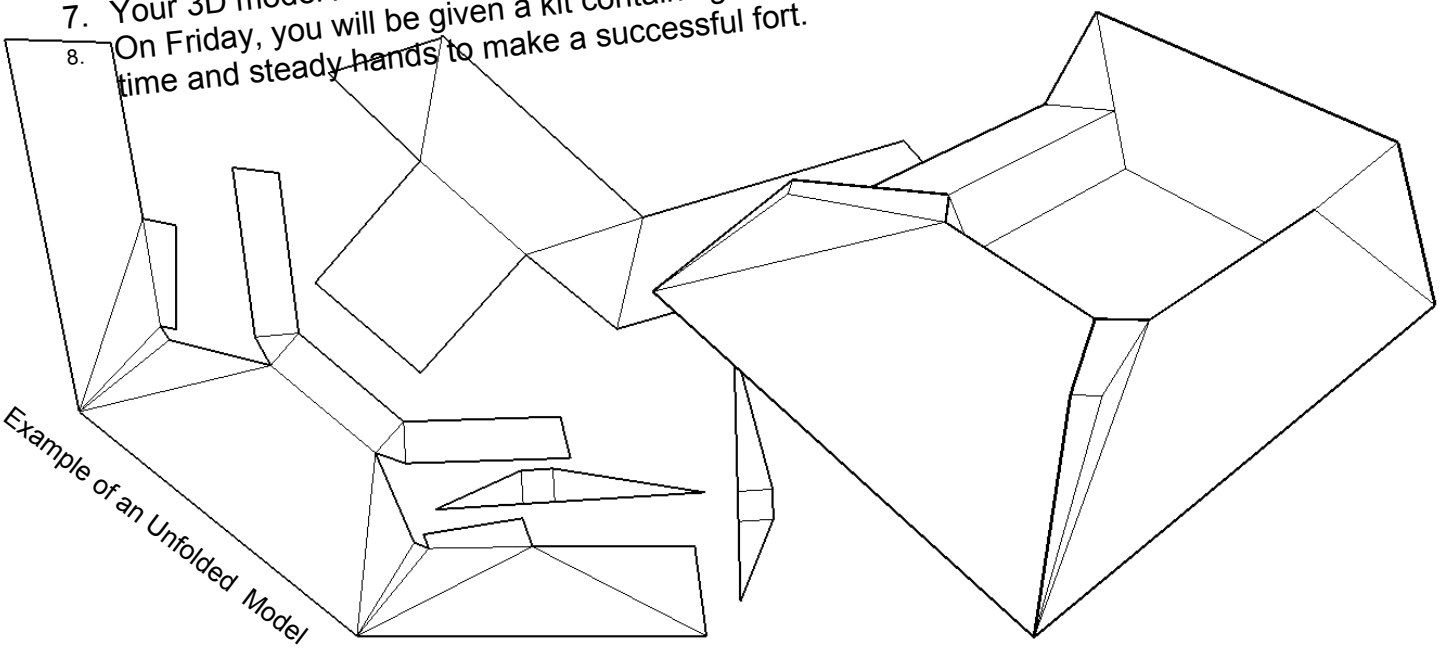


CYBER-FORT!

Louisiana Tech University — College of Engineering and Science — College of Liberal Arts

You have been asked to digitally design and fabricate a fortification to protect the marbles collected by your team's Boe-Bot. You will get basic training in the use of a 3-D surface modeling application called SketchUp (Google has a free basic download @ sketchup.google.com). With the assistance of your instructor and research assistants, you will use the 3-D information you design to generate a pattern. Finally, digitally fabricate your design out of 24"x36" 1/16" chipboard using an Epilog Laser Cutter in the School of Architecture. The rules each team must follow are:

1. Each model must have a maximum length of 2 feet at the assigned area in the arena.
2. Your total area should not exceed 1.5 ft².
3. Your total height limit is 5". Keep measurements to whole inches, with only an occasional 1/2".
4. You can only use triangular, square, or rectangular faces for your fort. An occasional five- or six-sided polygon is acceptable, but **no curves or circles**! See the examples, and **keep it simple:** do not design anything too complex or too small (it will make final assembly really tough)!
5. Your fort must have a bottom surface (a floor) with sides to fully contain all your collected marbles. The bottom sides of any solids should be open and hollow.
6. Your cyber-fort should fit the operability of your Boe-Bot, but be defensible against competing Boe-Bots.
7. Your 3D model is due at 5:00 pm on Thursday.
8. On Friday, you will be given a kit containing tape, glue, a cutter and a straightedge. You will need time and steady hands to make a successful fort.



Example of an Unfolded Model