

1) Look around your world and be amazed at the number of trusses you find; see them in bridges and most buildings. Take a picture of your favorite truss design and email it to me before the due date to this address: jlight@lcsc.edu. Additionally, draw your truss and identify the zero-force members. Pick only one truss since there will likely be several in your bridge/building/structure.

Turn in your picture identifying the zero-force members as noted on the class schedule (www.lcsc.edu/jlight/09_statics). If you don't have a digital camera, talk to me and we'll get one for you to use. If you were thinking of using your cell phone for taking the picture – don't; they don't have enough resolution so don't use it.

Grading for zero-force member picture project:

Category	Points
Nice picture	10
Zero-force members identified	10
Total	20

2) Pick one of the design projects from your text starting on page 333 (except the first one, 6-1D) and follow the directions. Turn in your completed design on graph paper along with detailed cost estimates (anyone reading your report should be able to follow your logic and costs) and any associated explanations. Write professionally - grammatically correct and neatly (or typed). Check due date with class schedule.

Grading for design project:

Category	Points
Drawing	10
Cost estimate (or whatever called for in design description)	10
Justification for design	15
Professional presentation	15
Total	50

3) Go to <http://bridgecontest.usma.edu/download.htm> and download the 2007 version of the bridge designer program. Design a bridge using a standard truss or one of your own designs that will pass the load test and come in under \$225,000. Use the medium-strength concrete decking material and a standard 180 kN truck for the load test. Your bridge must be at least 40 meters and at least 1/3 of the members must be tubes. Other than that, you can use any type of material, any design, and any size to optimize your design. Check due date with class schedule.

Total	30
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