EDSGN 497K Engineering Design and Analysis with Advanced CAD

Final Design project

Name: _____ Due Date: April 26, 2012

Design Task:

Design a chair capable of holding a person of 300 lbs and then conduct a finite element analysis to verify/prove that the chair is safe under such a load.

Design Specifications:

- The chair should be able to withhold up to 300 lbs;
- The chair should be ergonomically sound;
- The chair should be durable;
- The chair should be comfortable;
- The chair should cost no more than $100 (Note: Use mcmaster.com for estimation);
- The chair should be safe.

Major Deliverables:

A complete design report (part of the design portfolio for the course) including the following items:

- A solid model generated by CATIA;
- A complete set of working drawings including an assembly drawing and detail drawings for non-standard parts;
- A complete FE analysis report.

Evaluation:

The total value is **35%** of the course grade.

The breakdown is:

Assembly drawing:	40%
Detail drawings:	20%
3-D solid model:	20%
FEA Report:	20%
Total:	**100%**