Due: Last Class Day

The design project for MT 475-477 requires that you select a welding problem and use engineering planning and design to solve that problem. The project you select must be clearly stated, and the solution should use the basic principles discussed and presented in class and lab. The project will be graded based on the following points:

- Originality and creativity in problem selection and solution.
- Proposed joint design, including “simple” consideration of material properties (strength, fatigue resistance, corrosion and/or wear resistance, etc.) and joining process characteristics.
- Completeness of engineering drawing (technical details - appropriate dimensions, welding symbols and other engineering notations).
- Adequacy of the proposed material.
- Adequacy of the proposed welding process as well as the specification of filler metal, flux, shielding gas, backing strip, etc.
- Completeness of the outline of fabrication procedure.
- Proposed quality assurance and inspection procedure.
- Demonstration of economic feasibility.

The written report should be brief and concise, yet containing sufficient data and information to allow a manager (with technical background, however, not necessarily in welding) to evaluate your proposal for the financing of the project.

Suggested topics:

Steel storage rack
Workbench
Steel frame desk
Picnic table
Portable grill
Playground equipment
Laboratory setup
Thesis equipment setup
Offshore Platform*

* Just kidding!