MAE 11 - Homework Assignment Requirements

Homework assignments have the following requirements:

1. Homework must be clear and legible. Online submissions must be done as a single PDF file. The following information must appear on the first page:

   - **Name and Date**
   - **Course number**
   - **Homework number**

   If you are scanning an original hardcopy, be sure to preview before submitting and check the file to make sure it is clear, legible, and with all pages included and in the correct order. It is recommended that the hardcopies are prepared on single-sided, clean, new paper.

   Illegible homework will be returned ungraded.

2. The following is a **standard format** for organizing and presenting the solution to a typical thermodynamics problem (see sample solution on next page). Use this in your homework†.

   (a) **Problem Description** - include the following (* very important):
   - Basic description and given information
   - *Sketch of problem/geometry and **system** considered (use dashlines for system)
   - Initial (or inlet) state (knowns and unknowns)
   - Final (or exit) state (knowns and unknowns)
   - *Appropriate property diagrams (indicate state points, process lines)
   - What is to be determined

   (b) **Engineering Model** - list all required simplifying assumptions and idealizations.

   (c) **Basic Equations** - general form of relevant fundamental laws, equations, definitions.

   (d) **Analysis**
   - clear description of procedure to reduce basic equations to give solution.
   - keep equations in variable form (no numbers) for as long as possible.
   - identify all tables and charts needed for additional data, property values (e.g., "..from Table B.1.1").
   - substitute numerical values into final equations. be sure to specify all units and unit conversions.
   - keep significant figures consistent with given data.
   - check solution - correct sign, reasonable numerical values?
   - clearly indicate final answer(s) with underline or box.

   (e) **Discussion of Solution** - as needed (what you learned, key aspects of solution, etc).

   † Note: Some homework problems (e.g., Ch 1 problems) may not require all the above items. Follow the standard format as best as you can or as appropriate.

3. Grades will be determined by student's:

   - Understanding of the problem.
   - Identification of necessary procedure to obtain solution.
   - Clear and precise description of solution.
   - Correct numerical answers.