

## MAE 110A - Homework Assignment Requirements

Homework assignments have the following requirements. **Any homework not following these requirements will be returned ungraded.**

1. All homework must be done **neatly** on  $8\frac{1}{2} \times 11$  paper (single-sided on clean, new paper, stapled together, no frayed edges) with each problem and final solution **clearly indicated**. The following information must appear on the **first/cover page**:

- Name and Date
- Course number
- Homework number

Illegible homework will be returned ungraded.

2. The following is the **standard format** for organizing and presenting the solution to each homework problem<sup>†</sup> (See sample solution on next page):

- (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 state (knowns and unknowns)
  - Final 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).

<sup>†</sup> Note: Some of the 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.