

Overview of Homework for Math 541

The homework assignments for this course come from the text and some problems developed by Professor Don Short to prepare students for work in industry. The homework problems will mostly be entered on WeBWorK, where you can provide answers that will be graded electronically. Some of these problems will ask you to write a discussion of what you did or provide more details. In addition, some homework problems will be based on problems developed by Don Short, and those problems are motivated by industrial problems. For the industrial problems, you will be required to:

- describe and develop the method of solution
- implement your method on a computer
- test that your method actually produces the correct answer
- communicate your solution, with supporting visualizations.

Communication and presentation of all solutions is very important. To emphasize this skill, all homework assignments will use the following format and be stapled in the upper left corner.

Required Format

Section 1. Cover Page: Provided in class or downloaded from the class web site.

Section 2. Presentation of Solution: All answers and graphs labeled and in the order of the questions. All numerical answers will be given to 5 significant digits, unless specified in the problem description. This is the material that will go in the report to your contracting agency. You are NOT writing in the assignment the answers that are graded in WeBWorK.

Section 3. (Industrial Problems) Description and or Derivation of the Algorithm and Description the Algorithm Testing: What is the method of solution? Why was this algorithm chosen? Why is your answer correct? OR (Calculation Problems) Solution Detail: Supporting calculations clearly labeled. These will often be the supplemental questions asked inside your WeBWorK problems.

Section 4. Computer Implementation: All generating code documented and labeled as to which problem and attached as an appendix to your homework assignment.

GRADING POLICY

Points will be awarded only for correct solutions and graphs that are adequately labeled and documented. Up to 40% of the points awarded can be deducted for deficient algorithm description and testing from Section 3. Up to 40% of the points awarded can be deducted for lack of documented generating code from Section 4. Up to 20% of the points awarded can be deducted for lack of neatness and format.