

ASEN 5107 Nonlinear Finite Element Methods
Homework on Chapter 14: The CR Bar Element

Due Thursday March 8, 2007.

Be sure to attach this sheet as cover to your HW

Do four exercises:

14.1 (easy)

14.2 (easy)

14.3 (computer)

14.4 (computer)

Grading weights: Given at start of exercises.

If you find discrepancies with the Notes when doing 14.1, please highlight that in the HW - that will help in catching typos in a new Chapter.

The *Mathematica* handbook described in Section 14.3.2 of the Notes is posted on the web, linked to the Index of Chapter 14. It may be used as template if Exercises 14.3 and 14.4 are done with *Mathematica* (another language such as Matlab, however, may equally well be used since computations and results are numeric.)

To verify file downloading, execute the first cell and check that you get the same answers as in Figure 14.9.

No HW assignment on Chapter 15, since Notebooks have not been fully verified. Glitches remains in the partial differentiation checks.