EML3041 Computational Methods

What to Do In-Class Worksheet

Fall 2023

Week Four: September 11-September 15

Chapters

03.00 Physical Problems03.01 Prerequisites to Numerical Methods for Solving Nonlinear Equations03.03 Bisection Method03.04 Newton Raphson Method

Sequence of Work in Class for Tuesday

- 1. Experiment in class
- 2. Lecture on applications, polling questions, derivation of Newton Raphson method via Taylor series, pitfallsof the two methods, computational time for methods.
- 3. Do free-response handout questions by yourself.
- 4. Redo free-response handout with your group of 2. Revise solutions, if needed, and show your work.
- 5. <u>Submit question asked to be submitted at the end of the class</u>

Sequence of Work in Class for Thursday

- 1. Lecturing on left over topics from Tuesday.
- 2. Do free-response handout questions by yourself. Give justification and showwork.
- 3. Redo the free-response handout with your group of 2. Revise solutions, if needed, and show your work.
- 4. <u>Submit Question asked to be submitted at the end of the class</u>

Sequence of Work in Class for Friday (Test ends at 12:15PM)

1. Unit Test#1.

What if I Finish the Work for Day?

- 1. Solve the free response questions from all chapters 03.XX.
- 2. Solve the problem-set questions at the end of textbook chapters 03.03, 03.04.
- 3. Finish any leftover work from the last three weeks.



The QR code is the link to the textbook – use it for reference and solving more problems if finished. Alternatively, use a short link if you wish: <u>https://bit.ly/3RMpaAe</u>