EML3041 Computational Methods

What to Do In-Class Worksheet

Fall 2023

Week: November 13 – November 17

Chapters

08.00 Physical Problems
08.01 Prerequisites to Numerical Solution of ODEs
08.02 Euler's Method

Sequence of Work in Class for Tuesday

1. A minilecture on using ODE solvers for finding integrals
2. A minilecture on Runge-Kutta method derivation
3. Possible minilecture on the exact solution of ODEs

Sequence of Work in Class for Thursday

1. A minilecture on solving higher order ODEs
2. Do handout questions by yourself. Give justification and show work.
3. Redo the handout with your group of 2. Revise justification and solutions, if needed, and show your work.
4. Submit, if asked, the solution to a question at the end of the class

Sequence of Work in Class for Friday

1. Fundamentals Test – see link on CANVAS for the six concepts you will be tested on.

What if I Finish the Work for Day?

1. Solve the free response questions from chapter 08.02
2. Solve the problem-set questions at end of textbook chapters 08.01-08.02
3. Finish any left-over work from previous weeks.

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