Lab 2: Laplace and Inverse Laplace Transforms

Preamble

Associated Class Notes

This lab supports the materials covered in Chapter 3 Laplace Transforms (https://cpjobling.github.io/eg-247-textbook/laplace_transform/index) of the course notes. You may wish to refer to the Worksheets worksheet 4 (https://cpjobling.github.io/eg-247-textbook/worksheets/worksheet4) and worksheet 5 (https://cpjobling.github.io/eg-247-textbook/worksheets/worksheet5) for additional examples to try.

Other formats

This document is available in HTML (https://cpjobling.github.io/eg-247-textbook/labs/lab02/index) format for online viewing and PDF (https://cpjobling.github.io/eg-247-textbook/labs/lab02/lab02.pdf) for printing.

Acknowledgements

These examples have been adapted from Chapters 1, 2 and 3 of Stephen Karris, Signals and Systems : With MATLAB Computing and Simulink Modeling (5th Edition) (http://site.ebrary.com/lib/swansea/docDetail.action?docID=10547416).

Lab Exercise 2: Laplace Transforms

Use file save as to download the script laplace_lab.m (laplace_lab.m). Open the script as a Live Script and use the Matlab `laplace` and `ezplot` functions as appropriate to complete the examples given in the comments in the script.

Save and attach the resulting modified script `laplace_lab` as a Live Script file to the Teams assignement page for **Lab 2: Laplace and Inverse Laplace Transforms** of your OneNote portfolio.

3 Marks

Lab Exercise 3: Inverse Laplace Transforms

Use file save as to download the script ilaplace_lab.m (ilaplace_lab.m). Open the script as a Live Script and use the Matlab `laplace`, `ilaplace` and `ezplot` functions as appropriate to complete the examples given in the comments in the script.

Save and attach the resulting modified script `ilaplace_lab` as a Live Script file to the Teams assignement page for **Lab 2: Laplace and Inverse Laplace Transforms** of your OneNote portfolio.

2 marks

What to Turn In

Marks should be be claimed according to how many of the parts of Exercises 2 and 3 have been completed.

You should attach the files you wish to claim for to the Lab 2 submission page in OneNote, complete the claim form and turn-in your assignment through Teams.

Claim

Up to three marks can be claimed according to how much of Exercise 2 you have completed and Exercise 3 is worth an addition 2 marks.

See Assessment and Feedback: Labwork Assessment (https://docs.google.com/spreadsheets/d/1U-O2hu_Th369EHp6mdc1_j_7ARew2WosE93cjsW012c/edit?usp=sharing) for a detailed marking scheme.

The deadline for claims and submission is **Midnight, 1st March**.

Doing More?

If you have time remaining, you may wish to work through Appendix B of the textbook. That chapter