

The topic this week is **Fourier and Laplace Transforms**.

Readings: Riley, Hobson and Pence - Chapter 13

Boccio - 05b_Fourier Transforms.pdf

http://chaos.swarthmore.edu/courses/Physics50_2009/006_FourierTransform.pdf

Boccio - 05c_Laplace Transforms.pdf

http://chaos.swarthmore.edu/courses/Physics50_2009/007_LaplaceTransform.pdf

Fourier Transforms

13.01 Fourier Transform $f(t) = \exp(-|t|)$ **(just integrals)**

13.02 Properties of Fourier Transform

13.03 Fourier Transform $f(x) = H(x-a)\exp(-bx)$ **(just integrals)**

13.07 Fourier Transform - Square Pulse **(just integrals)**

13.09 Poisson Summation Formula

13.19 Auto-Correlation **(just integrals)**

13.20 Cross-Correlation **(just integrals)**

Laplace Transforms

13.21 Laplace Transforms **(just integrals)**

13.22 Find the function; Inverse Laplace Transform

13.23 Don't evaluate the Laplace Transform

13.28 Laplace transform stuff

You can use tables, calculators or Mathematica to do integrals.