CENG 4331 Review for Exam 2 Fall 2015

Ch. 3 The Fourier Series Go over Homework 3&5, Fourier Series and Kamen&Heck Web site.

1. Be able to calculate the Trigonometric Fourier Series (Page 101) as shown in example 3.2, page 103.
2. Understand the cosine-with-phase (shifted Cosine) form of Equations 3.8-3.10.
3. Understand even or odd symmetry page 104 and Example 3.3 p105.
4. Be able to calculate the complex exponential series as illustrated in Example 3.4. Know the relationship between the Fourier Series coefficients c_k and the Fourier Transform $X(\omega)$.
5. Be able to graph the line spectra as illustrated in Example 3.5, and 3.6, pages 111-112.
6. Be able to calculate the average power of a periodic signal given its Fourier series (see equation 3.29), page 113.

Fourier Transform Homework 4&5

1. Be able to calculate the Fourier Transform as illustrated in Example 3.8 and Example 3.12. Know how to do the integration.
2. Understand Example 3.9 and the definition of the sinc function.
3. Understand how to use the Properties of the Fourier Transform Page 141.
4. Understand how to use the Table of Fourier Transform Pairs Page 144 .

Ch. 4 The Fourier Transform of Discrete Time Signals

7. Review DFT Section 4.2
8. DFT and FFT algorithm Section 4.4

Ch. 5 Fourier Analysis of Systems HW6

1. Go over Examples 5.2 and 5.5.
2. Review Sampling and Aliasing Section 5.4.