PHYS 233A, ECE 237A, PHYS 147A

Lecture #2

MATH PRELIMINARIES – II

Concepts to be learned:

- 4. Basic Theorems Related to FT
 - a. Similarity theorem
 - b. Addition theorem
 - c. Shift theorem
 - d. Convolution theorem
 - e. Power theorem
 - f. Derivative theorem
- 5. Sampling
 - a. Nyquist Sampling rate
 - b. Interpolation
 - c. Undersampling and Aliasing
- 6. Discrete FT
 - a. Fourier Series
 - b. Computational Expense
 - c. Fast Fourier Transform (FFT)

Also review:

- 7. Laplace Transform
- 8. Green's function
- 9. Differential equations
- 10. Matrix algebra

Reading assignment:

Bracewell, Chapters 6,10, 18.

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NOTE: OFFICE HOURS EXCEPTION! Tue, Oct 7, 10 am (I am out of town Fri and Mon)