SUPPLEMENTARY MATERIALS II-B-2C: SIGNALS AND SYSTEMS DEVELOPED COURSE MATERIALS' TOPICS, SPRING 2019

Here is a complete listing of the 41 topics covered by my developed course materials for the Signals & Systems course, any of which are available on request.

1. Course schedule
2. Course syllabus
3. Complex math work sheet
4. Guidelines for Application presentations and reports
5. Intro to signals
6. Classification of signals
7. CT and DT periodicity
8. CT impulse function
9. Linear or NL, TI or TV examples
10. Linearity, time invariance
11. Intro to systems: concepts, illustrations, examples
12. BIBO stability
13. Love that convolution
14. Concept build 2, pb 2 soln – convolving a truncated triangle wave with a rectangular function
15. Convolution properties, convolution with impulse functions
16. Convolution worksheet II – for studio class
17. Why is the derivative of a step fn a delta fn?
18. From orthogonal signal space to Fourier basis functions
19. Orthogonal signal space
20. Exponential CTFS
21. CTFS properties; complex exponential in, cx expon out; CTFT
22. Using the CTFT
23. LTI bonuses with proofs
24. Final project proposal guildelines
25. Sampling
26. Instructions for final project written report and presentation
27. Sampling process in t domain and f domain
28. Sampling and aliasing
29. Matlab conv and signal practice
30. Conv worksheet with infinite sequences plus Matlab conv – also with soln+derivations
31. DT convolution
32. Properties of the DTFT – also with soln
33. Complex exponential in, complex exponential out – also with soln
34. Matlab example plots – rectangular and sinc DTFT – soln
35. Rectangular and sinc DTFT – also with soln
36. z-transform and the region of convergence – also with soln
37. Properties of the z-transform – also with soln
38. Solving difference eqns, P-Z plots, stability – also with soln
39. Matlab verification for transient, steady state, z-transform cf. DTFT
40. Relationship between the Laplace transform and z-transform – also with soln
41. Transient, steady state, z-transform cf. DTFT, Matlab verification – also with soln