



EECE 4510/5510 – Digital Signal Processing

Fred J. Frigo, Ph.D.

Fall 2017

Summary:

Introduction to the theory and practice of discrete-time signals and systems. Concepts covered include: Fourier Transforms, Z-transforms, linear time invariant system analysis in the time and frequency domains, sampling theory and Discrete Fourier Transforms. Application of these concepts includes: digital filter design techniques and the use of Fast Fourier Transforms for efficient frequency domain analysis. Labs and design projects related to specific signal processing applications are used to illustrate the material, including topics such as audio and image processing.

Location & Schedule:

Class meets Mondays & Wednesdays: 5:30pm-6:45pm
Haggerty Engineering Hall - Room Olin 120

Midterm Exam: Wednesday, October 18, 2017

Final Exam: Monday, December 13, 2017 5:45pm-7:45pm

No class – Labor Day – Monday, September 4, 2017

No class – Thanksgiving Break – Wednesday, November 22, 2017

Grading:

Homework and Projects: 60%

Mid-term exam: 20%

Final exam: 20%

Required Text:

Discrete-Time Signal Processing, 3rd Edition

By Alan V. Oppenheim and Ronald W. Schaffer

ISBN-10: 0-13-198842-5

ISBN-13: 978-0-13-198842-2

Published by Prentice Hall © 2010

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