

92.548 Mathematics of Signal Processing Spring 2010 Dr. Charles Byrne

Text: The text for the course is “Mathematics of Signal Processing: A First Course” , by C. Byrne. It is a considerably modified version of the book “Signal Processing: A Mathematical Approach” , by C. Byrne, published by AK Peters, Wellesley, MA in 2005. The current version of this text is available in pdf format on-line at my website <http://faculty.uml.edu/cbyrne/cbyrne.html> , under ALL COURSES, and also BOOKS IN PROGRESS. The version of the text that we will use for the course may be slightly different, and will be made available on the website, under ALL COURSES, 92.448-548, shortly before classes start.

Course Format: Lectures will be drawn from the text. There are numerous exercises throughout the text. Students are required to keep a separate notebook containing worked exercises, to be graded twice during the semester. The choice of exercises is left to the student, with the hope that he or she will skip ones that they find familiar and concentrate on those involving material that is new to them or, at least, less familiar. The text contains appendices on background material that the student may find helpful. These appendices also contain exercises the student may wish to attempt.

In addition to the mathematical exercises, there are a number of computer exercises throughout the text. Although these are not required assignments, it is certainly a good idea to do the programming suggested by some of these exercises, to get hands-on experience experimenting with the various algorithms involved.

Although I have tried to rid the text of typos and mistakes, I am sure there are still some lurking. If you find any, please let me know.