

# ECE 4213/5213

## Homework 4

Fall 2023

Dr. Havlicek

1. Text problem 2.1(c). Assume that  $n_0 \in \mathbb{Z}$  and  $n_0 > 0$ .
2. Text problem 2.1(f).
3. Text problem 2.1(g).
4. Text problem 2.3. To test your understanding, I suggest that you try working the convolution both ways. That is, make sure that you can get the same answer working it both as  $\sum_{k=-\infty}^{\infty} x[k]h[n-k]$  and as  $\sum_{k=-\infty}^{\infty} h[k]x[n-k]$ .
5. Text problem 2.7(a).
6. Text problem 2.7(d).
7. Text problem 2.10(a).
8. Text problem 2.10(c). Ignore the note that appears at the end of problem 2.10. Instead, you should just work the convolution using the steps given on pages 2.52 – 2.53 of the course lecture notes.
9. Text problem 2.18(d).
10. Text problem 2.19(a).
11. Text problem 2.23(b).

**DUE: 9/25/2023, 11:59 PM**

**(Scan or photograph your paper and upload to Canvas)**