

# ECE 438 Digital Signal Processing

## Week 10: Digital Filter Design (Week 2)

Date \_\_\_\_\_

Section \_\_\_\_

Name	Sign	Time spent outside lab
[    %]		
[    %]		

### Grading Rubric (Fall 2019)

	below expectations	lacks in some respect	meets all expectations
Completeness of the report			
Organization of the report <i>One-sided, with cover sheet, answers are in the same order as questions in the lab, copies of the questions</i>			
Quality of figures <i>Correctly labeled with title, x-axis, y-axis, and name(s)</i>			
Understanding of filter design using standard windows (25 pts) <i>Time domain and DTFT plots of windows, table of spectral parameters impulse response and DTFT of designed filter, questions</i>			
Understanding of filter design using the Kaiser window (25 pts) <i>Time domain and DTFT plots of windows, DTFT of designed filter, DTFT of filtered audio, questions</i>			
Understanding of FIR filter design using Parks-McClellan algorithm (25 pts) <i>DTFT of designed filter, DTFT of filtered audio, questions</i>			
Understanding of IIR filter design using Numerical optimization (25 pts) <i>Matlab code, DTFT of desired and designed filters, questions</i>			