Note: This practical laboratory report is worth 5% of the final course mark (it is worth 50% of the Practical 1 and Practical 2 Assignment, which together is worth 10% of the course mark). You should spend approximately 3 hours preparing for the report. The tutors will not assist you further unless there is real evidence you have attempted questions prior to the tutorial. Beyond the lecture and tutorial sessions, it is estimated that you will need 4 to 5 hours to complete the assignment (7-8 hours total). Remember that this should be turned in via the submission system.

Total marks: 100

1. [20] Pre-lab
   Before the laboratory started, there were 4 questions to answer (at the bottom of Page 2). Please submit answers to these.

2. [10] Laboratory Part 1
   In Part 1 of the Laboratory Procedure, it is requested to configure the signal generator (reference Q13 of Part 1).
   1. What offset and peak-to-peak values did you finally select?
   2. What would be the result of setting the offset to 0V?

3. [25] Laboratory Part 2
   In Part 2 of the Laboratory Procedure (top of Page 4), the section asks 3 questions. Please submit answers to these.

4. [10] Laboratory Part 3
   In Part 3 of the Laboratory Procedure, it is requested to configure the signal generator such that the peak-to-peak voltage is less than 5V (reference Page 5).
   What might be the result of setting this over 5V? (Briefly explain, but do not necessarily run)

5. [25] Laboratory Part 4
   In Part 4 of the Laboratory Procedure, it is requested to record and then plot the signal for the various cases in Part 3 (reference Page 6). Please complete the table and submit plots

6. [10] Overall System Review
   Looking at the overall laboratory, what are some of the limitation(s) on the process of filtering signal? What is the consequence of adding more and more “orders” to a signal?