Experiment 1:

Hand-In Sheet

Introduction to the NEXYS 2 + Sampling & Reconstruction on the NEXYS 2

Name: _____

Student ID: _____

Date: _____

Group Name/Members: _____

_____

As noted, this practical laboratory is worth 1-4 Extra Credit Points on the final exam. These will be distributed based on completion (as determined by the head tutor for your practical session) of the following sections at the end of the practical session.

Section Completed	**Summary Comments** (Student)	✓ (Tutor)
Pre-Lab (Preparation Lab 1 – Section II)		
Complete Experiment I		
Complete Experiment II – Part 1 & 2		
Complete Experiment II – Part 3		

➲ **Continued on Page 2**

Please succinctly answer the following questions for the various lab sections.

Section I

Q1) Suggest how you might modify the VHDL code so that a LUT with only 8 points is required. What are the advantages and disadvantages of this approach? List two of each. What is one overall benefit and downside to using a LUT?

Section II

Q2) Use this space to write your answers to the following questions from Part II:

a) Should the phase response be linear? Why or why not?

b) Explain, in terms of the Nyquist rate and sampling theory, what happens to the frequency of the output wave when the input wave frequency is swept from 10 to 15 kHz.

Section III

Q3) Summarise the differences between the four combinations of input and output signals experimented with in Part III. Note any differences between the sine wave and square wave outputs with the different combinations and provide a brief explanation.

Total Extra Credit Awarded: _____

Tutor Sign-Off: _____