

Lab Overview and Report Format

Lab Overview

The labs involve the design, assembly and test of combinational and sequential logic circuits. The logic circuits will be designed and implemented using the Foundation Series Tools from Xilinx, Inc.

Grading Policy

Grading will be based on laboratory reports and in-lab performance. TAs and/or the instructor will ask pertinent questions to individual members of a group at random.

The labs will be graded as follows:

- 20 points – random questions
- 20 points – lab report
- 30 points – simulation works
- 30 points – chip download works

Lab Instructions

- Eight lab experiments are to be conducted. Groups of 2 students will be formed. The lab report, *written individually*, is due one week after the first day of the experiment at the *beginning* of the next lab. Every person must submit his/her own lab report for each lab *before* each session.
- You are expected to read the lab description, and complete the pre-lab *before* each session. Read each week's assignment and complete any pre-lab calculations and/or design work *before* coming to the lab. Try to understand the objectives of the experiment and determine what information you should record in your laboratory notebook. If you have any questions, please see your TA before the scheduled time of your lab.
- Be prepared to show your pre-lab work to your TA. If you have VHDL code, schematic and wiring diagrams ready before you come to lab, you will be able to finish quite easily during the lab time. If you are not prepared, you may not be able to finish during the lab period and consequently, your grade will suffer. Each lab session lasts three hours. The TA or instructor is not required to give you extra time to complete your work.
- Reports that appear to be copied will be returned un-graded. No late report will be accepted.

Lab Reports

Please use the following format for your lab reports:

- *Cover:* Includes your name, student id number, course number, lab number, topic of the experiment, section number, and names of members in your group.
- *Abstract:* Brief introduction to the experiment and a summary of results.
- *Analysis:* Design techniques, implementation details, e.g., K-maps, boolean equations, schematics, etc.
- *Records:* Simulation results, VHDL input and output, schematic diagrams, etc.

- *Discussion:* Comments, circuit debugging and problem solving issues, and conclusions.