

**Due in class on Friday 3 March and Friday 17 March 2000
(Counts 15% of Your Class Grade)**

1. Do **Lab Exercise 4 on page 59** of *Rapid Prototyping of Digital Systems*.

Turn in:

- a) a document that describes your design and any design decisions that you made
- b) a printout of the schematic
- c) a printout of the test vectors and simulation output that shows that the circuit works as expected
- d) a printout of any appropriate timing analyses
- e) a statement signed by Prof. Walker or one of his graduate students who use the VLSI Design Lab (Liyang Chen, Junli Li, Wenjun Miao, or Kun Qiu) saying that you successfully downloaded the design to a UP1 board and it worked correctly

This problem is due in class on Friday 3 March 2000.

2. Do ***one*** of the following:

- a) **Lab Exercise 6 on page 59**
- b) **Lab Exercise 7 on page 59**
- c) Some comparable circuit. For this choice, you must “propose” the circuit that you want to work on, either in writing or by email, to Professor Walker by class time on Friday 3 March 2000. You must describe what you want to do in sufficient detail to make it clear that it is comparable to Lab Exercise 6 or 7.

Turn in printouts similar to those in problem 1 above.

On Friday 17 March, class will be held in the VLSI Design Lab. The class will either begin early or end late (class times will be determined later), and everyone will be required to briefly describe their Question 2 design and demonstrate that it works. Details on the presentation format, etc. will be provided later. The presentation and demo will count for part of your grade on this project.

(Note — my graduate students who work in the lab are there doing their own research, and are not TAs for the course, so they should not be expected to provide technical assistance with Altera’s MAX+PLUS II tools.)