DATE: January 23, 2007
TO: CENG 244 Students
FROM: Elaine Linde
SUBJECT: Laboratory #1 – Introduction To Logic Gates

Preliminary Work:
(1) Write [Your Name], “CENG 244”-[section] (“-51” or “-52”), [scheduled laboratory time] (“12:00” or “2:00”), and “Spring 2007” on the front of your logbook.
(2) Prepare your laboratory logbook with a “Table of Contents” section on the first page. Use three columns to list the “Date”, “Project Title”, and the beginning “Page” for each project. Number each page consecutively in your logbook.
(3) Attach this (and future) memo sheets and handouts to your laboratory logbook. Tape is recommended instead of staples.

Experimental Work:
(1) Familiarize yourself with the trainer board (an intro will be given).
(2) Prepare a “truth table” for each of the following IC chips:
   - NOT (74LS04) 6 1-input gates
   - AND (74LS08) OR (74LS32) 4 2-input gates
   - NAND (74LS00) NOR (74LS02) 4 2-input gates
   - NAND (74LS10) NOR (74LS27) 3 3-input gates
   Data sheets for these chips can be found at http://gauss.sdsmt.edu/shop/ttl.htm (e.g. click on “04” for 74LS04).
   Truth tables available on the datasheets on class website.
(3) Verify the entire “truth table” for one or two of the logic gates associated with each of the IC chips specified in #2 above.
(4) Document your experiments and findings such that others could follow and reproduce your work and they can be used for future reference.

Note 1: With all future laboratory projects, you will be expected to have the “Preliminary” portion of each laboratory assignment completed and entered into your logbook (in ink) prior to the beginning of the laboratory session.

Note 2: At the beginning of each laboratory session enter the date and time of your laboratory work as well as your partner’s name.

Note 3: At the end of each laboratory session and before you leave, make sure that have the laboratory TA initial your logbook at the end of your logbook entries indicating that you have completed the required documentation and concluding statements.