

# CE2120-Digital Systems Lab

## Lab 0

### Fall 2021/2022

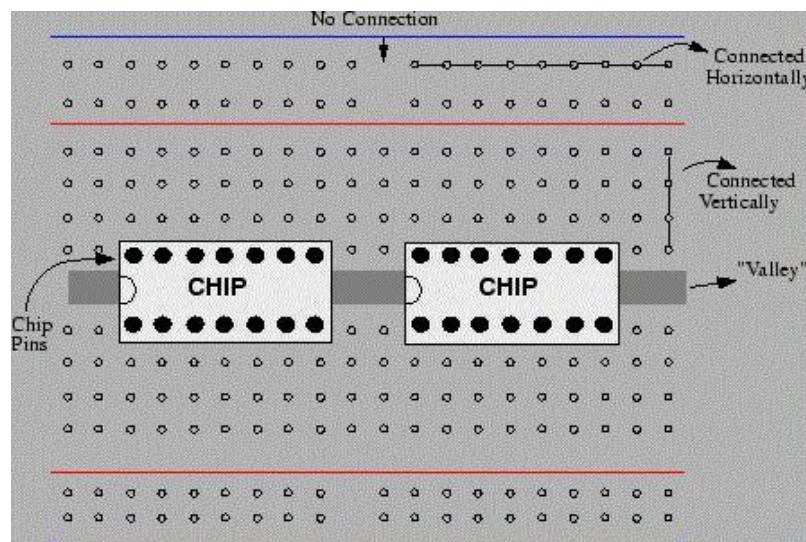
#### Pre-requisites:

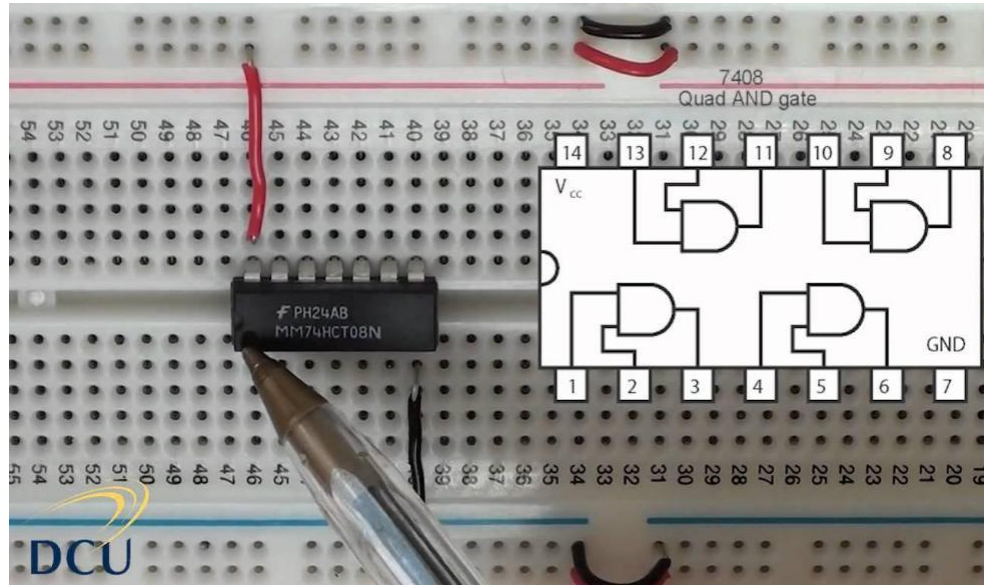
For this lab, please watch the following video lecture:

[https://gju.edu.jo.sharepoint.com/:v:/s/CE212-DigitalSystems-Section1-Summer2021/EXxtI8jPU8BDsvq6lhgl7JYBg9ik89BQ\\_JltUQTbx2DLNQ?e=qyf4XL](https://gju.edu.jo.sharepoint.com/:v:/s/CE212-DigitalSystems-Section1-Summer2021/EXxtI8jPU8BDsvq6lhgl7JYBg9ik89BQ_JltUQTbx2DLNQ?e=qyf4XL)

#### Protoboard

The protoboard is for holding and connecting chips in an easy and simple way. As illustrated below, chips are inserted across the middle "valley" in the protoboard. The set of holes in a vertical line above the valley are connected electrically, as are the holes below the valley. Thus each pin of the chip in the board is connected to the holes above (or below) the pin. So, to make a connection between different pins, you need only make connections between the holes by plugging the bare end of a wire into the holes above or below the pins. In the picture below, the horizontal lines at the top and bottom of the board delineate holes that are connected horizontally; note that the space in the middle indicates a disconnection. The horizontal holes are usually connected to the power and ground provided by the protoboard. The power and ground of the chips are connected to these holes. The first thing you should do in the lab is to connect power and ground to these horizontal strips.





## In Lab:

- Simulate the following circuits using Logisim software and then implement them using the breadboard.

