Breadboard Basics

A breadboard has holes that allow easy insertion of wires and electrical components (resistors, capacitors, etc.). **Use 22 gauge (AWG) solid wires.** Do not use stranded wires or incorrect wire sizes, as this may damage the breadboard. To make circuit construction easier, certain holes in the breadboard are electrically connected via conductors beneath the plastic. The holes that are electrically connected are indicated with black lines in the diagram below.

The long vertical columns of electrically connected holes on the sides are convenient places to connect power supplies, particularly when building circuits involving numerous power and/or ground connections. This is why they are labeled with plus and minus signs on your breadboard.

The center section of the breadboard consists of rows with 10 holes per row. The five holes on the left are electrically connected, as are the five on the right, but the left and right sides are separated by a nonconducting vertical strip. The gap between the left and right is just the right size for placing integrated circuits (ICs), such as op amps, which you will use later in the semester.