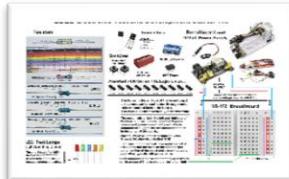


# Lessons for Beginning Digital Electronic Engineering

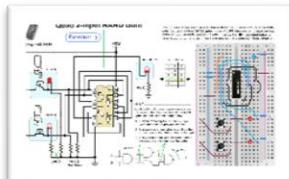
*(What is a computer made of and how does it work?)*

## Section 01 – The Electronic Transistor



Covers the fundamentals of electricity, the electronic transistor and solid-state electronic systems to include integrated circuits. Also, we begin training and using the breadboard testing and development kit to demonstrate the basics of electronic logic including building and testing actual digital logic circuits.

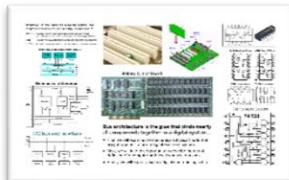
## Section 02 – Basics of Chip Based Components



Covers the fundamental concept of bus architecture from small integrated circuit chips to printed circuit boards and how they connect to each other to form a basic computer system. Includes more advanced work on the breadboard kit as well. Also, we cover why digital systems use 1's and 0's instead of base-ten.

## Section 03 –

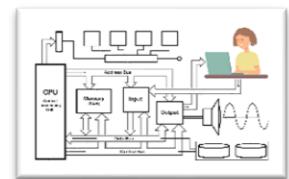
### Learning More Advanced Logic



Covers a number of the most used logic circuits. First, starting with concepts of separate internal mechanisms of the computer's central processing unit (CPU). This will include arithmetic and logical (ALU) operations and principles of input and output (I/O). Finally, proceeding with more advanced computer memory logic.

## Section 04 –

### The CPU and Computer System



Covers the computer's CPU. Here, we bring all of the pieces of the course together for an in-depth understanding of exactly what the computer is doing in order to run software and applications. We start by exploring the Clock mechanism that is the computer's engine and wind up with a holistic view of a computer's operation.

#### A Message From The Instructor:

This is a **FREE** course. It is brand new and has been designed in a modern way as to bring real college level material to younger age groups (teenagers and above). Whether you are school-age, college level, seeking a career, changing a career direction or just plain curious, you are invited to attend these four sessions and receive this electronic development kit used during the course for hands-on workshops. The kit is free if you receive federal housing assistance otherwise, there is a small fee.

