

Georg Simon Ohm



Engt 120

Mr. Toth

4/28/2014

An electric circuit is formed when a conductive path is created to allow free electrons to continuously move. This movement can be defined as a *current*, and is often used in terms of how it flows. The force that moves the electrons to flow is called *voltage*. Voltage is a specific measure of potential energy that is always relative between two points. *Resistance* can be defined as an opposition to motion, like friction.

Ohm's Law defines the relationship between voltage, current, and resistance. Using the equation $I = V/R$ Ohm is able to outline the beginning workings of electrical circuit analysis. The law states that the amount of current flowing in a circuit, made up of only resistors, is directly related to the voltage on the circuit, and the total resistance of the circuit.

Son of a locksmith and tailor, Georg Ohm was not likely to surpass his father's amount of education. Surprisingly though Ohm joined the University of Erlangen in 1805, but not soon after received his doctorate in science and mathematics. Instead, Ohm became tied up in student life, playing billiards and ice-skating. Actually Ohm didn't even end up staying at Erlangen for more than three semesters, before he was sent to Switzerland to take up a job as a mathematics teacher. A couple years later Ohm decided to continue his studies, and leave his post as teacher.

In October of 1811, Ohm finally received his doctorates degree. Once again teaching math, Ohm was now at the university level, but still unhappy with his title. Working in a school Ohm had opportunities to many institutionalized objects; such

as the free school library, as well as physics and biology laboratories. Where he ended up writing an elementary geometry book.

In 1820, Ohm's studies within the lab had helped him to discover electromagnetism, which detected the interaction of electric current. By 1826 Ohm had two documents published. They outlined his theories and workings beyond others studies of heat and conduction, and displayed experimental evidence. In 1827, *Die galvanische Kette, mathematisch bearbeitet* was published. This famous book also holds the underlying mathematical information necessary to understand any of Ohm's work, as well as the original Ohm concept.

By the time that Ohm's works were published, Georg still had yet to be recognized for any kind of enormous discovery. Most refused to accept Ohm's mathematical theories, because physics had always been a very non-mathematical study. In 1833, still hurt and feeling underappreciated, Georg Ohm accepted a professor position at a university in Germany. It wasn't until 1841 that the Royal Society finally recognized his works, and 1845 before he became a full member of the Bavarian Academy.

In 1843 Ohm actually started other research on a whole new matter. Focusing on the fundamental principles of physiological acoustics, Georg Ohm studied how one hears a combination of tones. Though these studies didn't go as far, nor did he get great recognition.

In 1849 Ohm took a job as the curator of the Bavarian Academy's physical cabinet. Lecturing now at the University of Munich, Professor Ohm was finally, after

a lifelong dream, appointed to the Chair of Psychics. But only two short years later did Georg Ohm die, most likely of old age, at 65 in the year 1854.

Citation

"Georg Simon Ohm." *Ohm Biography*. N.p., n.d. Web. 25 Apr. 2014. <<http://www-history.mcs.st-and.ac.uk/history/Biographies/Ohm.html>>.

"SAMPLE LESSON PLAN." *Title*. N.p., n.d. Web. 25 Apr. 2014. <<http://mste.illinois.edu/nwaight/ohm/HOME.html>>.