

## 29.2: Introduction

An electromagnet is a coil of conducting wire encircling an iron core that becomes a magnet when electric current is present in the wire. The iron core strengthens the magnetic effect. Electromagnets have a north magnetic pole and a south magnetic pole at the ends of the coil. Alternating current induces a magnetic field, so as long as there is electric current running through the coil, the coil will be magnetic. The magnetic field from the electromagnet forces the domains in the iron core to align, strengthening the overall magnetic effect.

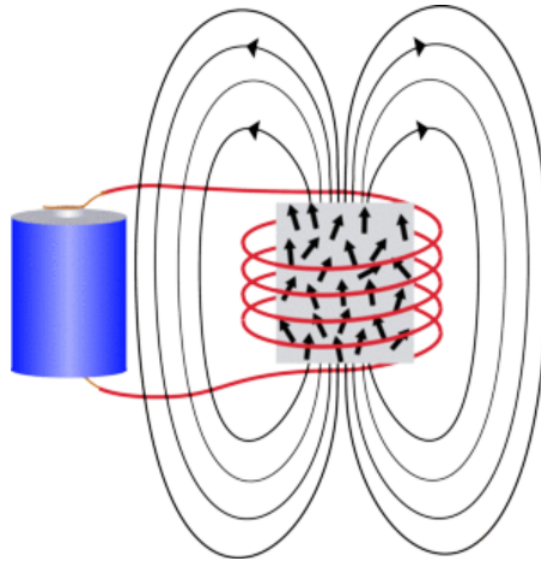


Figure 29.2.1: An Electromagnet.

### Contributors and Attributions

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