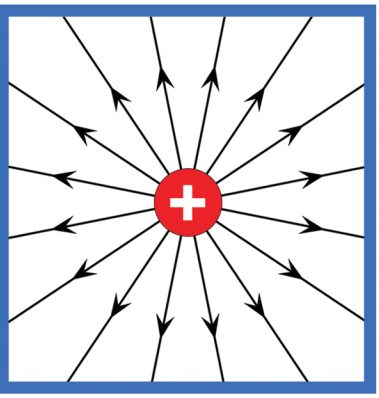
ELECTRIC FIELD LINES OF A POSITIVE CHARGE

Electric field lines around a positive charge radiate outward in a radial pattern, extending in all directions. They never cross each other, maintaining a uniform distribution. The density of lines near the charge signifies a stronger electric field, while their spacing widens with increasing distance, indicating a decrease in field strength.

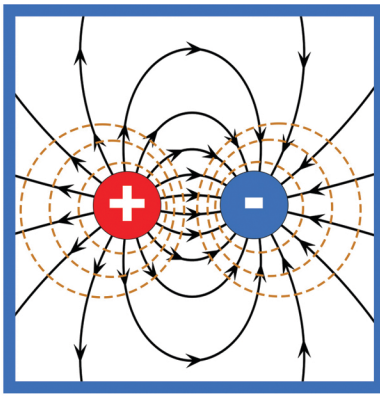
PHYSICS II



ELECTRIC FIELD LINES OF A DIPOLE

Electric field lines originate from the positive charge and terminate on the negative charge within a dipole. This pattern creates field lines that connect the two charges directly. The equipotential surfaces around a dipole are always perpendicular to electric field lines.

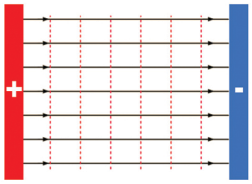
PHYSICS II



ELECTRIC FIELD LINES & EQUIPOTENTIAL SURFACES OF A A PARALLEL PLATE CAPACITOR

In a charged capacitor, the electric field lines run perpendicular to the plates, while the equipotential lines run parallel to the plates. This arrangement results from the constant electric field between the plates, making the electric field lines point directly from one plate to the other and creating equipotential surfaces that are parallel to the

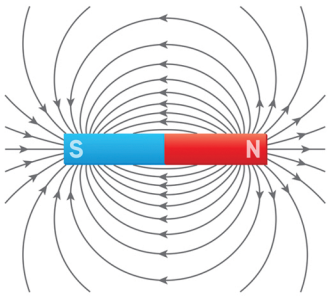
PHYSICS II



MAGNETIC FIELD LINES AROUND A BAR MAGNET

The magnetic field lines around a bar magnet emerge from its north pole, curve outward, and loop around to enter the south pole. These lines represent the direction of the magnetic force, showing how a compass needle would align itself in the field.

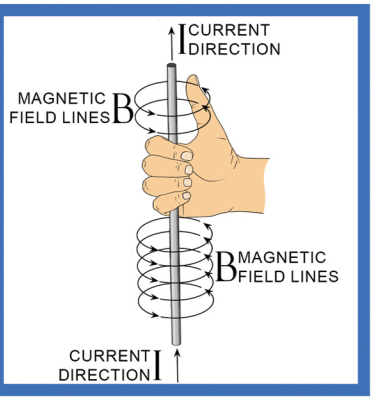
PHYSICS II



MAGNETIC FIELD AROUND A CURRENT-CARRYING WIRE

A current-carrying wire produces a magnetic field with concentric circular field lines, whose direction follows the right-hand rule:
if you point the thumb of your right hand in the direction of the current, your curled fingers indicate the direction of the magnetic field.

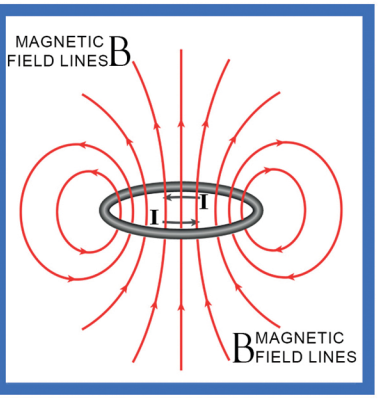
PHYSICS II



MAGNETIC FIELD AROUND A CURRENT-CARRYING LOOP

When an electric current flows through a circular loop, it creates a magnetic field with field lines forming concentric circles around the wire.
Inside the loop, the field lines combine to produce a stronger, nearly uniform magnetic field at the center, resembling the field of a bar magnet

PHYSICS II



MAGNETIC FIELD LINES AROUND A SOLENOID

Magnetic field lines around a solenoid resemble the field pattern of a bar magnet. Inside the solenoid, the magnetic field lines are strong, uniform, and parallel, running along the axis from the south end to the north end. Outside the solenoid, the field lines spread out and curve back from the north end to the south end, forming closed loops.

PHYSICS II