Planes

The plane through the point P_0 normal to $\vec{n} = Ai + Bj + Ck$ is given by the vector equation,

$$\vec{n} \cdot \vec{P_0P} = 0$$

and the component equations,

$$A(x - x_0) + B(y - y_0) + C(z - z_0) = 0$$

Given a line L and a point P in a plain you can find the equation of the plane,
Take a point Q on the line. Now fine $\vec{QP}$ and the direction vector of the line L (call that d). Now the normal $\vec{n} = \vec{QP} \times d$. Then we can use the formula $A(x - x_0) + B(y - y_0) + C(z - z_0) = 0$ to get the equation.