Tangential planes

Tangent planes to a surface $F(x, y, z) = 0$ at a point P on the surface:

$$\vec{r} \cdot \vec{N} = \vec{r}_P \cdot \vec{N}$$

where N can be taken as the gradient ∇F of F:

$$N = (\partial F / \partial x, \partial F / \partial y, \partial F / \partial z)$$