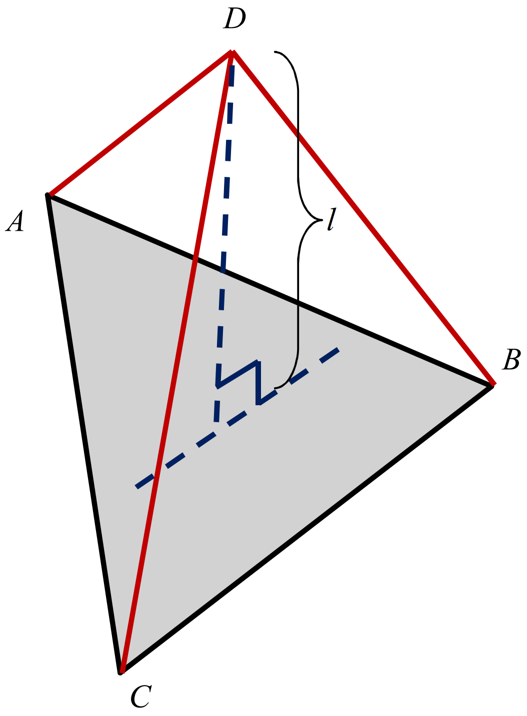

The formula of a tetrahedron with vertices A, B, C and D is given by $\boxed{\frac{1}{6}\left|\left(\overrightarrow{AB}\times\overrightarrow{AC}\right)\bullet\overrightarrow{AD}\right|.}$

Here is the full derivation:

Let vector normal to plane ABC be n, then $n=\overrightarrow{AB}\times\overrightarrow{AC}$

Area of triangular base $ABC=\frac{1}{2}\left|\overrightarrow{AB}\times\overrightarrow{AC}\right|=\frac{1}{2}|n|$

Vertical height of vertex D above plane $ABC=l=\left|\overrightarrow{AD}\bullet\hat{n}\right|=\frac{1}{|n|}\left|\overrightarrow{AD}\bullet n\right|$

Volume of tetrahedron $=\frac{1}{3}$(base area) (vertical height l)

$$=\frac{1}{3}\left[\frac{1}{2}|n|\right]\left[\frac{1}{|n|}\left|\overrightarrow{AD}\bullet n\right|\right]$$

$$=\frac{1}{6}\left|\overrightarrow{AD}\bullet n\right|\quad=\frac{1}{6}\left|\left(\overrightarrow{AB}\times\overrightarrow{AC}\right)\bullet\overrightarrow{AD}\right|\quad\text{(shown)}$$