$\deg \pi = \int_V \pi^* \omega^k$ where $\pi : V \longrightarrow \mathbb{P}^k$.

see Bott, (Differential Forms in Algebraic Topology
P 47.

If $\pi^* \omega_{\mathbb{P}^k} = \omega_V$, which is correct in case $\mathbb{P}^k$ induces a metric on V as in P29, the statement is correct.

Even if the statement is true, the next statement is not true. It should be corrected as follows:

Since $\deg V = \int_V \omega^k = k! \, vol(V)$ in $\mathbb{P}^n$ by P31, so we may define the degree of V to be simply its volume multiplied by k! .

Comment on the statement that by Bertini applied to the smooth locus of V the generic (n-k)-plane $\mathbb{P}^{n-k} \subset \mathbb{P}^n$ will intersect V transversely.

By applying Bertini's theorem to the smooth locus of V, the generic (n-k)-plane $\mathbb{P}^{n-k}$ intersects V^* in a set of finite points, which is open in $\mathbb{P}^{n-k} \cap V$.

Consider $\mathbb{P}^{n-k} \cap V$. $\Rightarrow$ $(V \cap \mathbb{P}^{n-k})^*$ is a set of discrete points, and $\dim (\mathbb{P}^{n-k} \cap V)^* = 0$.

Since $\mathbb{P}^{n-k} \cap V$ is an analytic variety, $\exists$ no limit point of $\mathbb{P}^{n-k} \cap V$ in $\mathbb{P}^n$ by P50 Coro. 4J, Whitney.

$\Rightarrow$ $\mathbb{P}^{n-k} \cap V$ is a set of discrete points.

$\Rightarrow$ A generic (n-k)-plane $\mathbb{P}^{n-k}$ intersects V in a