A knot invariant $d(K)$ measures a knot’s distance from alternating if $d(K)$ is a non-negative integer such that $d(K) = 0$ if and only if $K$ is alternating and such that $d(K_1 \# K_2) \leq d(K_1) + d(K_2)$. We compare and contrast several such distance invariants, including dealternating number, alternation number, alternating genus, Turaev genus, and warping span. (Received September 15, 2013)