

# Some Characterizations of Dual Curves in Dual 3-space $D^3$

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In the context of dual vector algebra, the study of dual curves within a dual 3-space  $D^3$  represents an interesting and current field of research. This lecture aims to show the important properties and characteristics of these curves, providing a connection between fundamental Euclidean geometry of curves and surfaces and their geometrical implications to dual space. With E. Study's mapping serving as a fundamental tool, we consider the relationship between dual spherical curves and ruled surfaces. Several theorems and results regarding dual curves will be considered, with an emphasis on their relevance and applications in spatial kinematics. Finally, we will investigate the behavior of dual curves at small deformations and the change of important geometric properties based on curvature.