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The Hochschild cohomology of an associative algebra carries the structure of a graded Lie superalgebra induced by the Gerstenhaber bracket. In this paper we give a precise description of this structure for truncated polynomial algebras $\mathbb{F}[X]/(X^n)$ with $n > 1$. In particular, we give explicit formulae for the Lie superbracket. In the modular situation where $n = p$ is the characteristic of the ground field \mathbb{F} , we describe the Hochschild cohomology spaces as modules for the simple Witt algebra. Moreover, we classify the graded superideals of the infinite-dimensional modular graded Lie superalgebra $\mathrm{HH}^{*+1}(\mathbb{F}[X]/(X^p))$ for $p > 3$. (Received March 06, 2006)