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Samuel Chamberlin* (samcham@math.ucr.edu), University of California at Riverside, 900 University Ave., Department of Mathematics Surge 202, Riverside, CA 92521. *Integral bases for the universal enveloping algebra of $\mathfrak{g} \otimes A$.*

Given a finite-dimensional, simple Lie algebra \mathfrak{g} over \mathbb{C} and a commutative, associative algebra with unity over \mathbb{C} , A , we exhibit a \mathbb{Z} -form for the universal enveloping algebra of $\mathfrak{g} \otimes A$ and an explicit \mathbb{Z} -basis for this \mathbb{Z} -form. We also produce explicit commutation formulas in the universal enveloping algebra of $\mathfrak{sl}_2 \otimes A$ that allow us to write certain elements in PBW basis order. (Received September 12, 2010)