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Jennifer Firkins Nordstrom* (jfirkins@linfield.edu), Department of Mathematics A468, Linfield College, 900 S Baker Street, McMinnville, OR 97128. *Leavitt Path Algebras with Coefficients in a Noncommutative Ring.*

Given a directed graph E we define a method for constructing a Leavitt path algebra $L_R(E)$ whose coefficients are in an arbitrary unital ring. We extend Tomford's work on Leavitt path algebras with coefficients in a commutative unital ring to the context of Leavitt path algebras with coefficients in a noncommutative ring. In particular, we extend Tomford's proofs of the Graded Uniqueness Theorem and the Cuntz-Krieger Uniqueness Theorem to Leavitt path algebras with coefficients in an arbitrary unital ring. Furthermore, we show that if K is a field and R is a K -algebra, then $L_R(E) \cong R \otimes L_K(E)$ as R -algebras. (Received September 20, 2009)