1035-16-1168   **David Nacin*** (`nacind@wpunj.edu`), Mathematics Department, William Paterson University, 300 Pompton Road, Wayne, NJ 07470. *Noncommutative Algebras Associated to Polynomials over Skew Fields.*

We will give an introduction to a non-commutative version of Vieta's Theorem, which can be used to find the coefficients of a polynomial over a skew field when given only the roots of the polynomial. We then will introduce two algebras: one corresponding to the slack left over in the process of finding such coefficients and another which is a natural generalization of the first. We will then discuss the graded dimension of these algebras and some properties that they possess. (Received September 18, 2007)