Let $E$ be an elliptic curve over $\mathbb{Q}$ of conductor $N$. Then $E$ has a modular parameterization, specifically there is a surjective morphism $\phi$ from the modular curve $X_0(N)$ to $E$. The degree of this map, $m_E$, is called the modular degree. There are many theorems and conjectures relating the modular degree $m_E$ of an elliptic curve to the modular form $f_E$ associated to $E$, of particular interest is the relation to congruence primes. Unfortunately, generalizing to number fields, we no longer always have modular curves. Takahashi and Ribet use the Jaquet-Langlands correspondence to parameterize elliptic curves over $\mathbb{Q}$ by Shimura curves. I will examine how this generalizes to modular elliptic curves and in general modular abelian varieties over number fields. (Received September 25, 2012)