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Leavitt path algebras are Bézout.

Let E be a directed graph, K any field, and let $L_K(E)$ denote the Leavitt path algebra of E with coefficients in K . We show that $L_K(E)$ is a Bézout ring, i.e., that every finitely generated one-sided ideal of $L_K(E)$ is principal. Then we use the Bézout property of Leavitt path algebras to investigate the injectivity of a naturally-occurring class of modules over $L_K(E)$, by means of a divisibility notion which arises in this setting. (Received June 19, 2016)