1027-16-47   **Gene D. Abrams*** (`abrams@math.uccs.edu`), Department of Mathematics, University of Colorado, Colorado Springs, CO 80933-7150, **Gonzalo Aranda Pino**, Centre de Recerca Matemática, Bellaterra (Barcelona), SPAIN, and **Mercedes Siles Molina**, Universidad de Málaga, Málaga, SPAIN. *Chain conditions for unital Leavitt path algebras.*

In our first main result, necessary and sufficient conditions on a finite graph E are given so that the corresponding Leavitt path K-algebra $L(E)$ is left (equivalently, right) artinian. These are precisely the semisimple algebras $L(E)$, as well as precisely the finite dimensional K-algebras $L(E)$. In our second main result, we give necessary and sufficient conditions on the finite graph E so that $L(E)$ is left (equivalently, right) noetherian. These are precisely those K-algebras $L(E)$ for which every graded component in the natural $\mathbb{Z}$-grading of $L(E)$ is finite dimensional. In both situations, isomorphisms between these algebras and appropriate direct sums of matrix rings over K and/or $K[x, x^{-1}]$ are provided. Likewise, in both situations, equivalent graph theoretic conditions on E are presented. (Received February 06, 2007)