Kyle Evitts* (kyle.evitts@linfield.edu), Brian Whetter and Brian Keating. Tilings of Annular Regions.

In this talk we discuss our results from the Willamette Valley REU program this summer where we investigated tiling questions in the integer lattice. The most basic question is, given a connected region $R$ made up of unit cells and a set of polyomino tiles $T$, can one cover $R$ using tiles from $T$ so that each cell in $R$ is covered once and only once? A lot is already known about tilings of simply connected regions, so we studied tilings of rectangular annular regions over the set of $T$ and skew tetrominoes. We give a complete classification of which annular regions are tileable. However, the goal of this talk will be to present our enumeration of possible tilings for a subset of the regions we studied. (Received September 13, 2013)