## **Topic: Heron Triangles and Elliptic Curves Bill McCallum**

Abstract: A Heron triangle is a triangle with rational sides and rational area. The problem of finding Heron triangles turns out to be a matter of finding rational solutions to certain plane cubic curves (elliptic curves). Using this problem as an entree, I will survey the theory of rational points on elliptic curves defined over the field of rational numbers, including a treatment of the Mordell-Weil theorem and the method of infinite descent.