

1135-VU-1192 **Samantha Pezzimenti*** (spezziment@brynmaur.edu), Bryn Mawr, PA. *Legendrian Knots and their Lagrangian Fillings*.

Given a knot, what surfaces in the 4-dimensional space can it bound? We ask a version of this classic knot theory question about Legendrian knots, which are knots that satisfy an additional geometric condition imposed by a contact structure. Now the question is: Given a *Legendrian* knot, what *Lagrangian* surfaces can it bound? From an invariant polynomial associated to the Legendrian knot, we can extract a great deal of geometric information about the Lagrangian surface. Extending work of Sabloff and Traynor about embedded fillings, I show that this polynomial also encodes restrictions on the minimal number of double points of an immersed filling of a given genus. I will also give some combinatorial constructions of some “minimal” immersed fillings. (Received September 20, 2017)