CLAUDIA MILLER, Syracuse University, Syracuse, NY 13244 A Riemann–Roch formula for the blow-up of a nonsingular affine scheme

Hilbert polynomials have classically been shown to be determined by intersections with hyperplanes. We give another approach over regular local rings via Intersection Theory on the blow-up scheme. The result comes in the form of a Riemann–Roch formula for the blow-up of a nonsingular affine scheme.