Plasma Instability in Graphene Bilayers ANTONIOS BALASSIS, Fordham University, GODFREY GUMBS, Hunter College of the City University of New York — The problem of plasma instability in a pair of coupled semiconductor layers when a dc current is passed through one of the layers has been vigorously investigated over the years. This may be carried out by solving for the real and imaginary parts of the frequency in the polarization function making the dielectric function vanish. We analyze the conditions for plasma instability in a graphene bilayer for various chemical potentials (doping) as well as layer separation.