MATH 7361 Algebraic Geometry and Non-linear Equations (3 semester credit hours) This course covers Theta-functions of one variable, Analytic construction of the Jacobian of a compact Riemann surface, Related theta-functions, Algebraic construction of the hyperelliptic Jacobians, C. Neumann dynamical system, Characterization of the hyperelliptic period matrices, Soliton equations, The Riemann-Schottky problem and the Novikov conjecture. This subject has applications to Mechanics, Geometry, and Cryptography. Prerequisite: MATH 5301 or MATH 6301. (3-0) T (2016-02-05 23:34:18)