962-J1-208 **Martha L Abell*** (somatla@gsvms2.cc.gasou.edu), Dept. of Mathematics and C.S., P.O. Box 8093, Georgia Southern University, Statesboro, GA 30460, **John A Rafter**, Dept. of Mathematics and C.S., P.O. Box 8093, Georgia Southern University, Statesboro, GA 30460, and **James P Braselton**, Dept. of Mathematics and C.S., P.O. Box 8093, Georgia Southern University, Statesboro, GA 30460. *An Investigation of Stochastic Population Models.*

Mathematical models of population growth can be investigated using the computer algebra system Mathematica. These include the basic deterministic model as well as stochastic models involving environmental and demographic stochasticity. The authors use graphical and statistical methods to analyze the results by taking advantage of several user-defined Mathematica commands. The information and computer code presented in the paper may be used to solve more generalized problems and may be shared with students in order to introduce them to the area of mathematical modeling. At Georgia Southern University, these models are presented in an upper level course, Mathematical Models, which has as prerequisites differential equations, familiarity with a computer language, and fifteen additional hours of upper level mathematics. (Received August 28, 2000)