Information security programs are instituted by organizations to provide guidance to their users who handle their data and systems. The main goal of these programs is to foster a positive information security culture within the organization. As the collection and use of data expands in all economic sectors, the threat of data breach due to human error increases. Employee’s behavior towards information security is influenced by the organizations information security programs and the overall information security culture. This study examines the human factors of an information security program and their effect on the information security culture in higher education institutions. These human factors consist of stringency of organizational policies, behavior deterrence, employee attitudes towards information security, training and awareness, and management support of the information security programs. A survey questionnaire was given to employees in the Florida College System to measure the human aspects of the information security programs. Confirmatory factor analysis (CFA) and Structural Equation Modeling (SEM) were used to investigate the relationships between the variables in the study using IBM® SPSS® Amos 24 software. The study results show a positive relationship between management support for information security and the overall information security culture. Additionally, the results show a weak positive association between information security culture and organization policies, deterrence, and awareness and training along with a weak negative association between security culture and employee commitment. This suggests a need for further study and study tool design to properly assess information security programs and their effects on the organizational security culture.