Information and Communication Technologies (ICT) is relatively a new innovation which has been embedded in nearly all sectors. A number of studies have pointed out ICT to play a critical role when integrated in instruction. However, some teachers have been reported to integrate ICT in instruction while others do not. Different studies have reported several factors that influence teachers’ integration of ICT in instruction. Those teachers reported to integrate ICT in instruction have been found to have both trained to integrate ICT in instruction and observed other teachers integrate ICT in instruction. Most of the studies on ICT integration in instruction have been done majorly in the developed countries. However, researches on ICT integration in instruction in Early Childhood Teacher Education (ECTE) in Kenya have been done in educational levels other than universities. This study aims at finding out what determines ICT integration in instruction in university early childhood teacher education. Specifically the study shall focus on ICT perceived abilities, perceived usefulness of ICT in teacher education, and leadership support on ICT integration in instruction. How each of the independent variables affects the dependent variable – level of ICT integration in instruction in university early childhood teacher education shall be determined. Ex post facto research design is found to be the most suitable to be used in this study since perception is a natural phenomenon which the researcher cannot manipulate. Two theories will guide this study: Diffusion of Innovations theory by Rogers and Technology Adaption Model theory by Davis. In order to accurately determine how each of the independent variables influences the level of lecturers’ ICT integration in instruction, this study will use three tools: questionnaire, interview schedule, and observation checklist to collect data from the respondents. The study sample will be purposely selected public and private universities in Kenya that offer early childhood teacher education. Stratified sampling will be used to pick the universities to be included. The study target population will be all the university lecturers teaching early childhood teacher education and all will be included in the study. In descriptive statistics means, standard deviations and percentages will be calculated. Independent samples t-test and Pearson’s Product Moment Correlation Coefficient are the inferential statistics to be used to test the level of significance at alpha value 0.05. The research results will be analysed and tabulated. Conclusion and recommendations will be clearly stated.