**Electron Cooling at ACR**, Y.N. RAO, IMP; K. OHTOMO, RIKEN; T. KATAYAMA, INS, University of Tokyo - The Accumulator-Cooler Ring (ACR), one component of the Multi-Use Experimental Storage rings (MUSES) proposed fro RIKEN RI beam factory, aims at accumulation and cooling of ~RI beams and stable heavy ion beams. Beam accumulation will be done combining the repeated multiturn injection with RF stacking. The stacked beam permanently experiences stochastic and electron cooling at the top of stack. The ion species which will be cooled in the ACR range from $^{12}C^{6+}$ to $^{238}U^{92+}$ at typical energies between 150 MeV/u and 500 MeV/u. Accordingly, a electron cooling system is required for electron of energy up to 300 keV and maximum current of 10 A. This paper describes briefly the conceptual design of the e-cooler. In addition simulation of the electron cooling process, taking into account betatron and synchrotron oscillations of single particle and space charge effect of electron beam, is reported.