Polarized \(^3\)He in the Neutron Electric Dipole Moment Experiment JACOB YODER, University of Illinois at Urbana-Champaign, NEDM COLLABORATION — In the neutron electric dipole moment (nEDM) experiment to be performed using the Fundamental Neutron Physics Beamline at the Spallation Neutron Source, ultra-cold neutrons (UCN) are produced by interaction with superfluid \(^4\)He. The precession frequency of polarized UCN in the presence of a strong electric field is measured using a spin-dependent capture reaction on polarized \(^3\)He; the protons and tritons produced in the reaction are detected via the scintillation light they produce in the superfluid \(^4\)He. In this talk, the production of polarized \(^3\)He, its introduction into the superfluid \(^4\)He, its relaxation in interactions with the materials of the experiment, its transport to the measurement cells and eventual removal from the system will be discussed.