

REQUIREMENTS	Type of Test UN: Unit Testing US: Usability Testing A: Acceptance Testing	Pass or Fail P: pass F: fail	Contributor GC: Garrett Cook JM: Jasmine Mishra JP: Jose Pena Revelo LT: Lucas Towers
Functional Requirements			
qEELS			
Software will load the spectrogram from a PRZ file	UN	P	GC
Software will render points and boxes of indicated features on the spectrogram	A	P	GC
Software will detect fitted peaks of surface and bulk plasmon			
Software will calculate calibrated energy loss axis and transfer axis			
Software will output results to CSV format	UN	P	GC
Software will be functionally equivalent to legacy software			
Nanomi Optics			
Software will render lenses on diagram	A	P	JM
Software will calculate upper beam ray			
Software will calculate beam ray through projective, intermediate, and objective lenses			
Software will render upper beams on diagram	A	P	JM
Software will render lower beams on diagram			
Software will display results in a table	A	P	JM
Software will calculate optimized settings for projective lens			
Software will calculate optimized settings for intermediate lens			
Software will calculate optimized settings for objective lens			
Software will be at least as functional as legacy software			
Alignment Software			
Software will load DM3 images	UN	P	LT
Software will perform automatic contrast adjustment	UN	P	LT
Software will perform translation, rotation and scaling of frames	UN	P	LT
Software will perform coarse alignment of frames with cross-correlation	UN	P	LT
Software will automatically detect the location of particles with kernel convolution	UN	P	LT
Software will calculate optimized alignment of frames	UN	P	LT
Software will output intermediary alignment info to csv format			
Software will write DM3 images	UN	P	LT
Software will be at least as functional as legacy software			
User Requirements			
qEELS			
User of legacy software will be comfortable with the new GUI	A	P	GC
User can click on the spectrogram to indicate location of features	A	P	GC
Nanomi Optics			
User of legacy software will be comfortable with the new control GUI	A	P	JM
User of legacy software will be comfortable with the new results GUI	A	P	JM
Alignment Software			
User of legacy software will be comfortable with the new main window GUI	A	P	JP
User of legacy software will be comfortable with the new contrast adjustment GUI	A	P	JP
User of legacy software will be comfortable with the new transformation window GUI	A,US	P	JP,LT
User of legacy software will be comfortable with the new automatic tracking window GUI	A	P	JP
User of legacy software will be comfortable with the new manual tracking window GUI			
User can adjust contrast manually by dragging on diagram			
User can adjust particle location manually using manual tracking window			
User can export images to DM3 format			