Checkouts: 4 inch processing room   (Bentley Wall)   _____

Main Standard Process Path Only   USER NAME

Session 1   Date: _____   **Pass   Fail**

0. Login, Gowning (Observe no unnecessary or inappropriate objects into room)

    a. User logs into system correctly (login to reserved cleanroom time)   ☐

    b. User gowns correctly (gloves, safety glasses, gowning order, clothing)   ☐

    c. User degowns correctly (suit storage, glasses returned)   ☐

1. Glass Cleaning (Branson, Drying Oven) (Ask: What process time?)

    a. User checks and adjusts water level   ☐

    b. User turns on heat, and leaves cover in place   ☐

    c. User operates Branson correctly   ☐

    d. User collects solvent waste correctly   ☐

    e. User turns off heat, cleans area and leaves Branson in proper resting condition   ☐

2. Photoresist Spinning (Laurell1) and Laurell1 hotplate (Ask: What spin params? RPMs, Times)

    a. User turns on proper utilities (wall, local valve)   ☐

    b. User turns on hotplate and programs to proper temp   ☐

    c. User checks spinner program parameters, and edits as needed   ☐

    d. User pre-cleans the spinner and work area (ACETONE)   ☐

    e. User dispenses proper amount of resist by proper dispense method   ☐

    f. User handles substrate properly   ☐

    g. User uses timer correctly   ☐

    h. User cleans up machine well   ☐

    i. User turns off utilities   ☐

    j. User cleans up work area and puts everything back in place   ☐

3. UV Mask Exposure (NuArc) (Ask: What Dose?)

    a. User sets up NuArc correctly (dose, mask placement)   ☐

b. User operates NuArc correctly (vacuum, vent, glass support) ☐

c. User restores NuArc to proper resting condition ☐

Session 2   Date: _____   **Pass Fail**

4. Develop (Wet Bench 4) (Ask: What develop time?)

    a. User sets up chemical bath correctly (tank, immediately prior to use) ☐

    b. User follows procedure correctly, and uses timer ☐

    c. User evaluates one plate for process end point ☐

    d. User collects chemical correctly (immediately) ☐

5. Etch (Wet Bench 4) (Ask: What etch time?)

    a. User sets up chemical bath correctly (tank) ☐

    b. User performs etch test procedure ☐

    c. User follows procedure correctly, and uses timer ☐

    d. User evaluates one plate for complete etch ☐

    e. User collects chemical correctly ☐

6. Strip (Wet Bench 4) (Ask: What strip time?)

    a. User sets up chemical bath correctly (tank) ☐

    b. User follows procedure correctly, and uses timer ☐

    c. User evaluates one plate for process end point ☐

    d. User collects chemical correctly (immediately) ☐

Session 3   Date: _____   **Pass Fail**

7. Polyimide Spinning (Laurell2) and Laurell2 hotplate (Ask: What params? RPMs, Times)

    a. User turns on proper utilities (wall, local valve) ☐

    b. User turns on hotplate and programs to proper temp ☐

c. User checks spinner program parameters, and edits as needed ☐

d. User pre-cleans the spinner and work area ☐

e. User obtains proper PI from freezer and allows proper warm up ☐

f. User dispenses proper amount of polyimide by proper dispense method ☐

g. User handles substrate properly ☐

h. User uses timer correctly ☐

i. User cleans up machine well (NO ACETONE, only IPA or NMP) ☐

j. User turns off utilities ☐

k. User cleans up work area and puts everything back in place ☐

8. Polyimide Bake (Curing Oven) **(Ask: Where do you find Temp and Time vs PI type?)**

a. User places substrates appropriately on baking trays ☐

b. User operates baking oven properly **(Ask: What is max temp?)** ☐

c. User is aware if proper baking procedure (temp, time) ☐

d. User places tag on oven for unattended run ☐

Session 4   Date: _____   **Pass Fail**

9. Rubbing (Hand Rub Station)

a. User cleans the area and sets up the blocking ☐

b. User handles rub blocks correctly ☐

c. User operates rub station correctly ☐

d. User cleans up after use and returns all materials to proper location ☐

10. Spacer Application (Spacer Box)

a. User turns on appropriate utility ☐

    b. User prepares spacer sprayer correctly ☐

    c. User sets up plate in box correctly ☐

    d. User applies spacers correctly and evaluates ☐

    e. User cleans up properly when finished and turns off utilities ☐

11. Gasket Dispense (Asymtek2)

    a. User precleans the work station and turns on proper utilities ☐

    b. User obtains proper adhesive ☐

    c. User starts up the machine correctly and takes no physical risks with gantry ☐

    d. User sets up programming correctly (config, directory, file) ☐

    e. User sets up machine correctly (z height, pressure, camera offset) ☐

    f. User performs gasket dispense with no personal safety risk ☐

    g. User cleans up, turns off utilities and returns all components correctly when done ☐

12. Assembly (Vacuum stone work station)

    a. User turns on appropriate utility ☐

    b. User does not clean the stone by usual means ☐

13. UV Cure (Dymax)

    a. User powers up the unit and sets the timer correctly ☐

    b. User wears UV safety glasses the entire time ☐

    c. User cleans up the area when finished to proper resting condition ☐

    d. User evaluates a test run and makes pressure adjustment for run 2 ☐

Once you successfully complete your training checkout sessions, and you receive your final email confirmation of this, you will need to come see me one more time to discuss any remaining questions you may have, any issues noted in the last session summary email report, and then to sign the training checkout document. Please read the paragraph below before you sign it.

This is your contract with us certifying that you have been trained well, understand all aspects of the training, and accept the responsibilities of working in the LCI cleanroom facility:

I, _____, have watched the online training videos provided to me, have read the operational manuals and safety information related to the above tasks, have been trained 1:1 with facility staff, and have gone through an independent check out procedure for each task. **I attest that I understand all of the safety hazards and operational protocols for which I have been trained.** I understand all of the safety risks related to the equipment on which I have been trained and feel that I understand all of the operational details, safe use practices and I feel that I am well trained to accept the responsibility to work independently. I understand that staff endorsement of my working independently in the cleanroom facility does not extend to processes, materials or equipment use for which I have not been trained by facility staff, and accept that I will not engage in any activities that will put myself, other workers, the equipment, materials or facility at risk. I understand that failure to comply with all facility protocols and requirements will result in the loss of access privileges. I will not attempt to train anyone else for processes with which I am familiar, nor will I allow visitors to enter on my endorsement. **I will not deviate from the standard processes that have been taught to me without further authorization, nor will I bring any chemical materials into the facility without advance clearance from facility staff and proper MSDS documentation filing.** I also acknowledge that any damage to equipment or any unreasonable material loss caused by me will be the financial responsibility of myself/my research advisor. I also acknowledge the awareness and acceptance that the cleanroom facility is under 24 hour video surveillance and my activities in the facility are observed and recorded for safety monitoring reasons.

Trainee: _____ Date: _____

Facility Staff Trainer: _____ Date: _____