# Full PI Checklist

## Instructions:
Learn and get checked off on all of the following tools and skills. You are required to learn 3 bonus tools of your choice but can choose to learn more. Each group’s Trained/Staffed box can be checked once you have either staffed that area while on shift or given a training on its section of the Prospective Checklist. Once complete, scan this page and turn it in to the front desk (if not completing digitally). Follow the instructions posted there to schedule a Full PI Interview.

## 3D Printing
- Trained/Staffed
- Resin Printing
  - Tested: ______________
- Advanced Materials
- Multi-material Printing
- S5/S3 Operation

## Waterjet
- Trained/Staffed
- ProtoMAX
- GlobalMAX
- Turning Hoppers On/Off
- Brittle Materials
- Clearing Garnet Hose
- Changing Path Start/Stop

## Wood Room
- Trained/Staffed
- Nail Gun
- Table Router
- Trim Router
- Track Saw
- Crosscut Sled
- Drum Sander
- Work Holding

## Lasers
- Trained/Staffed
- Rotary Tools
- FLP Laser
- Cermark
- JobControl

## Metal Room
- Trained/Staffed
- Horizontal Bandsaw
- Vertical Bandsaw
- Cold Cut Saw
- Changing Sander Belt
- Buffing Wheels
- Dremel

## Bike
- Chain Cleaning
- Adjusting Rear Derailleur
- Changing Tires

## Craftland
- Trained/Staffed
- Button Maker
- Printable Stickers

## Electronics
- Trained/Staffed
- Oscilloscope
- Waveform Generator
- Multimeter

## Paint Booth
- XTC3D, Bondo, & Primer

## Bonus (3 Required)
- ______________________
- ______________________
- ______________________
**Bonus Tools and Skills**

The list below contains all the additional tools and skills that are available in the Invention Studio to learn.

* Denotes tool that must be taught by the respective master.

### Wood Room
- Wood lathe*
- Chisels and hand planes*
- Domino
- Kreg Jig
- Japanese Hand Saws

### Laser
- DXF cleanup
- Dithering
- Leather engraving
- Puzzle-making software

### Paint Booth
- Air Brush*
- Create a stencil
- Strip paint off an object

### Electronics
- PCB Mill*
- Hot air rework station
- Microscope with monitor
- Battery recycling/charge measuring
- Heat shrink
- SMD soldering
- Circuit design software (KiCAD or EAGLE)
- Arduino design and programming

### Bike
- Common sources of play (bottom bracket, headset, dropout/axles)*
- Wheel truing*
- Rim/disc brake adjustment
- Pegboard tools

### CAE
- SolidWorks Simulation
- NX Nastran
- CAD Upgrades (shortcuts, 3D space mouse, mouse customization)
- COMSOL
- ANSYS

### XR
- 3D Scanner*

### Waterjet
- Etch/scribe*
- Clearing garnet clog on ProtoMAX*
- Clearing air cylinder clog on Maxiem*
- Waterjet Brick & Alternatives
- Saw Mode

### Metal Room
- Metal Lathe*
- Angle Grinder
- Grinding Wheels
- Spot Welder
- Tapping and countersinking holes
- Sand Blaster
- Nibbler
- Reciprocating Saw
- Compact Bandsaw
- Three Wheel Bender

### 3D Printing
- Markforged*
- Composites/PVA
- Unclogging Bowden Tube on BambuLabs
- Unclogging S3/S5 Nozzles

### Craftland
- Embroidery Machine*
- Leather Sewing*
- Bedazzler
- Serger*
- Sublimation Printer*
- Foam cutting tools
- Advanced Vinyl Cutter: Trace Panel, Cardstock, Multiple/Extra Tools, Troubleshooting, etc.

### CNC
- Manual Mill*
- Tormach*
- Pocket NC*
- EMCO*
- CAMaster*
- Shaper Origin*