<table>
<thead>
<tr>
<th>UR Nano Machines</th>
<th>Metrology - Wilmot Lab</th>
<th>Internal Hourly Rate</th>
<th>Internal Hourly Rate with Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWIPE Wilmot Prep Rm 216 Entrance Fee Per Day</td>
<td>$6.00</td>
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</tbody>
</table>

### Tier 2
- **SEM**
  - Scanning Electron Microscope: $65.00, $125.00
  - Zeiss-Auriga SEM/FIB: $65.00, $125.00

### Tier 3
- **FIB**
  - Focused Ion Beam used along with SEM: $80.00, $140.00
- **EBL**
  - Electron Beam Lithography: $80.00, $140.00
  - 50 kV Elionix ELS-S50EX: $80.00, $140.00

### Tier 4
- **AFM**
  - Atomic Force Microscope: $22.00, $82.00
- **UIR**
  - Nicolet Nic-Plan IR Microscope: $22.00, $82.00
  - uIR microscope and Magna 470 IR spectrometer: $22.00, $82.00

### Tier 0
- **DSP**
  - Denton Sputtering Tool: $60.00
- **LADD**
  - Ladd Evaporator: $60.00
- **CPD**
  - Critical Point Dryer: $60.00
- **SBT**
  - SBT Plasma Cleaner/O2 asher: $60.00
  - SBT Tripod polisher, saw & polishing wheel: $60.00
- **UMT**
  - Ultramicrotome: $60.00

### Cleanroom Tools - Goergen Basement Lab
| SWIPE Cleanroom Entrance Fee Per Day | $12.00 |

### Tier 1 - Vaccum Deposition Tools
- **AJA**
  - AJA Sputtering Tool: $45.00, $105.00
- **ALD**
  - Atomic Layer Deposition: $45.00, $105.00
  - Cambridge Nanotech: $45.00, $105.00
- **GRPFUR**
  - PlanerTech Graphine Furnace: $45.00, $105.00
- **PVD**
  - PVD 75a Hybrid Sputter-Evaporation Tool: $45.00, $105.00
  - Lesker: $45.00, $105.00
- **RIE**
  - Reactive Ion Etcher Blue Ar-O$_2$-CH$_4$: $45.00, $105.00
  - South Bay: $45.00, $105.00
- **YES**
  - CVD Plasma Oven: $45.00, $105.00
  - Yield Engineering Plasma Oven: $45.00, $105.00
- **DICER**
  - Dicing Saw: $45.00, $105.00
  - DISCO DAD3221: $45.00, $105.00
- **XSP**
  - Cross Section Polisher: $45.00, $105.00
  - JEOL Ion mill IB-19530CP: $45.00, $105.00

### Tier 4 - Cleanroom Tools
- **MAOAI**
  - Mask Aligner: $22.00, $82.00
  - OAI Mask Aligner: $22.00, $82.00
- **SSI**
  - Rapid Thermal Processor: $22.00, $82.00
  - SSI RTP: $22.00, $82.00
- **LZRWR**
  - Mictotech Laser Writer: $22.00, $82.00
- **FILM**
  - Filmetrics: $22.00, $82.00
- **LITHO**
  - Lithography Bench with Spinners: $22.00, $82.00
- **AMBIOS**
  - Ambios Surface Profiler: $22.00, $82.00
- **PROBE**
  - 4 Point Probe Station: $22.00, $82.00
- **WBONDER**
  - Wire Bonder: $22.00, $82.00
<table>
<thead>
<tr>
<th>Tier 0 - Cleanroom Free Tools</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Megasonics Cleaner</td>
<td>$60.00</td>
</tr>
<tr>
<td>SHOV ShelLab low-temperature Ovens</td>
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<tr>
<td>RCA RCA clean bench</td>
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<tr>
<td>RCA general acid bench</td>
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<tr>
<td>Spin Rinse Dryer</td>
<td>$60.00</td>
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<table>
<thead>
<tr>
<th>Tier 5 - XPS</th>
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<tbody>
<tr>
<td>XPS XPS Day Rate 6am - 6pm</td>
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<tr>
<td>XPS Night Rate (Required at least 6 hour time block)</td>
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<tr>
<td>XPS Weekend Rate (Required at least 20 hour time block)</td>
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</table>

<table>
<thead>
<tr>
<th>Engineer Time/Training Time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer Hourly Rate</td>
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<tr>
<td></td>
<td>$60.00</td>
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</tbody>
</table>

Subtotal: $60.00

Updated: 7/1/2022