

### Academic Pricing Schedule for FY24 Academic Year – 9/23 to 9/24

#### Maskmaking – Heidelberg DWL66

- Soda Lime mask – 5" X 5" X 0.09" – LR Chrome
  - Actual charges will be billed at internal labor and tool rates plus cost of mask blank
    - Heidelberg - \$60/hr for Internal Academic - \$87/hr for Ext Academic
    - SL Mask Blank ~\$30 (charged at market price)
- Quartz mask – 6" X 6" X 0.25" – LR Chrome
  - Actual charges will be billed at internal labor and tool rates plus cost of mask blank
    - Heidelberg - \$60/hr for Internal Academic - \$87/hr for Ext Academic
    - QZ Mask Blank ~\$297 (charged at market price)

#### Materials Charges

- **Wafers** – Not provided/for sale by SNL
- **Chemicals**

The SNL provides standard photoresist and developer for use on its equipment – the cost (including disposal) is included in the price of the tool.

Chemicals brought into the SNL by the customer will be assessed a disposal fee depending on the nature of the waste. Fees will be higher for metal etchants, solvent/acid mixtures, and others that must be sent out for disposal.

#### **Notes**

- Users are free to obtain their own supplies, but RIT carries no responsibility to supply storage space for materials stockpiles. Chemicals must be approved and properly shipped before being brought into the SNL. Users will be charged up front for disposal fees incurred.
- Repair parts for tools and equipment above and beyond normal wear and tear may also be charged back to the user on a cost basis not including SMFL labor.
- Materials charges include but are not limited to consumable chemicals, sputter targets, evaporation sources, photographic film, and labware.
- Incidental materials such as aluminum targets and evaporants (Al, Cu, Cr), standard lithography chemicals, standard CVD and etch gases, bulbs for aligners are covered under the equipment fee schedule.
- The user may be asked to pay a surcharge for equipment/materials usage above and beyond normal usage. This would be negotiated before the work started.



# Semiconductor and Nanofabrication Laboratory

## Equipment Set Rates

	Internal Academic *	External Academic*
Monthly Fee	\$40 / Month / User	\$60 / Month / User
<b>Tool Set</b>	<b>Internal Academic</b>	<b>External Academic</b>
Tier 1 Tools	\$25 / hr	\$37 / hr
<b>Tool Set</b>	<b>Internal Academic</b>	<b>External Academic</b>
Tier 2 Tools	\$40 / hr	\$58 / hr
<b>Tool Set</b>	<b>Internal Academic</b>	<b>External Academic</b>
Tier 3 Tools	\$60 / hr	\$87 / hr
	<b>Internal Academic</b>	<b>External Academic</b>
New User Fee	\$100 / User	\$100 / User

\* If a user is actively working on more than one project in the month, then each project is charged the monthly fee for that user.

- Internal Unfunded projects will be accessed \$75 per month per user.

## New User Fees (one-time training charge, in-person lab access only)

### Approvals

Internal RIT Academic Users must submit an approved Project Request Form before any work may proceed. External Academic Users should submit a Proposal for Work.

### Billing Process –Academic

The SNL will bill funded researchers for their work to be performed in the SMFL. Journal entries against the researchers Oracle account are typically performed at the end of each month.

External Academic users will receive a copy of their invoice for comment before the final invoice is sent.

### Notes

An overnight pumpdown on our PVD tools (processing run occurring the following morning) is charged out at 5 hours.



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## Tool Set by Tier Level

Monthly	All laundry/Wipes/Labware
	Some share of facilities - DI, Air
	Basic Chemistry – Acetone/IPA
	All Microscopes
	Rudolph Ellipsometer
	CDE Resmap 4 point probe
	Prometrix SM300 Spectramap
	Tencor P2 Profilometer
	Woolum VASE
	Wyko NT1100 Dynamic Profiler

Tier 1	CEE 100 Developer
	CEE Resist Coaters (3)
	KS MA150 Aligner
	KS MLB4 Contact Aligner
	LAM 490 Plasma Etcher
	Technics PE2A
	Trion Apollo Asher
	Wet Benches - All

Tier 2	ADT Dicing Saw
	AG 610A
	AME P5000 PECVD/RIE
	ASM 150mm LPCVD
	Bruce Furnace Tubes
	CHA Ebeam Evaporator
	CHA Flash Evaporator
	CVC 601 Sputter
	CVC Evaporator Glass Jar
	Denton Au Sputter
	GCA Stepper
	PE4410 Sputter
	STS ASE
	SVG Tracks (2)
	Trion Minilock RIE
	Trion Phantom III ICP RIE
	Trion Phantom III RIE
	Ultratech ALD
	Xactics XeF2 Etcher

Tier 3	ASML Stepper
	Heidelberg DWS Laser Writer
	Plasmatherm Apex ICP Etcher
	Trion PECVD
	Varian 350D Implanter