

Harvard Center for Nanoscale Systems
ACADEMIC RATES (effective 03/01/17, subject to change)
Imaging and Analysis Facilities

INSTRUMENT	Rate/Unit ⁵	On-Site Staff Assistance ⁸	Remote Staff Assistance ⁹	Notes
APT-1 3D Atom Probe	\$75/hour	\$75/hour	\$165/hour	7
B15A (sample prep) Room Entry Charge	\$40/day	\$75/hour	\$165/hour	6
CD-2 Critical Point Dryer	\$15/15 min	\$75/hour	\$165/hour	
CD-3 Critical Point Dryer, Tousimis 931 GL	\$15/15 min	\$75/hour	\$165/hour	6
FIB-2 Zeiss NVision 40	\$75/hour	\$75/hour	\$165/hour	
FIB-4 FEI Helios 660	\$90/hour	\$75/hour	\$165/hour	
FIB-5 Hitachi NB5000	\$75/hour	\$75/hour	\$165/hour	
HAR-001 JEOL 2010 FEG TEM/STEM	\$55/hour	\$75/hour	\$165/hour	
HAR-008, HAR-040 (B15A) Plasma Cleaners	\$40/hour	\$75/hour	\$165/hour	6
HAR-009 Gatan 691 Ion Mill	\$20/hour	\$75/hour	\$165/hour	6
HAR-017 Ultramicrotome	\$20/hour	\$75/hour	\$165/hour	
HAR-027 JEOL 2100 TEM	\$55/hour	\$75/hour	\$165/hour	
HAR-030 Baltec Sputter Coater	\$20/15 min	\$75/hour	\$165/hour	6
HAR-034 Freeze Etching System	\$55/hour	\$75/hour	\$165/hour	
HAR-037 1010 Dual beam Ion-Mill	\$20/hour	\$75/hour	\$165/hour	6
HAR-039 1040 NanoMill	\$20/hour	\$75/hour	\$165/hour	6
HAR-043 Cryoplunge	\$30/15 min	\$75/hour	\$165/hour	6
HAR-049 Cross-section Polisher	\$30/hour	\$75/hour	\$165/hour	6
HAR-050 EMS 300T D Sputter Coater	\$20/15 min	\$75/hour	\$165/hour	6
SEM-4,5,6,8 (Ultra55, Supra55, EVO, Ultra Plus)	\$47/hour	\$75/hour	\$165/hour	
TEM-5 Technai Cryo-Bio FEG TEM	\$65/hour	\$75/hour	\$165/hour	
TEM-7 Zeiss Libra200 a-corrected FEG TEM	\$75/hour	\$75/hour	\$165/hour	
TEM-9 FEI Tecnai Arctica CryoTEM	\$75/hour	\$75/hour	\$165/hour	
TEM-11 JEOL ARM STEM	\$75/hour	\$75/hour	\$165/hour	
General Imaging Staff Assistance	N/A	\$75/hour	\$165/hour	4
Monthly Cap / user Harvard Monthly Cap / user Non-Harvard)	\$2,000 Harvard \$2,600 Non-Harv	none	none	5,10

1. Self-use is charged at the base rate.
2. The on-site or remote staff assistance rates are in addition to any equipment rate.
3. In addition to actual time used, users will be charged for all unused time reserved in the Scheduling Tool. Charges for unused reservations are not included in the monthly cap.
4. CNS staff assistance for all equipment training and certification, preparation of samples, or use of tools not listed above is charged at the General Staff Assistance rate. On-site and remote assistance are not included in cap.
5. 30% OH added to total monthly charge for all non-Harvard users and all users not paying with Harvard 33-digit code.
6. Daily room charge (B15A) is applied in addition to separate hourly or per use tool charges.
7. Minimum 6 hour reservation.
8. Assisted labor billed as HAR-031
9. Remote assistance labor billed as HAR-032
10. After cap level is reached, additional qualifying expenses are added at 33% of base rate.

Harvard Center for Nanoscale Systems
ACADEMIC RATES (effective 03/01/17, subject to change)
Nanomaterials Facilities

INSTRUMENT	Rate/ Unit ⁵	On-Site Staff Assistance	Remote Staff Assistance	Notes
3DP-1 Makerbot 3D printer, 3DP-2 Form 2 SLA 3D printer	\$20/hour	\$75/hour	\$165/hour	6
BET-1 Analyzer	\$10/hour	\$75/hour	\$165/hour	6
BIO-13 Synergy Plate Reader	\$28/hour	\$75/hour	\$165/hour	6
G05 Bio-Materials Facility	\$40/day	\$75/hour	\$165/hour	6
G06 Chemical Nanotechnology and SLF Facility	\$35/day	\$75/hour	\$165/hour	6
LZR-2 Versalaser Cutting / Engraving System	\$30/hour	\$75/hour	\$165/hour	6
LZR-004 Mira Femtosecond Laser, LZR-006 White Light Laser, LZR-007 Mira Femtosecond Laser	\$10/hour	\$75/hour	\$165/hour	
MET-10, MET-15 FTIR	\$37/hour	\$75/hour	\$165/hour	
MET-14 UV-VIS, MET-18 Micro UV-VIS, MET-20 Spectrofluorometer	\$37/hour	\$75/hour	\$165/hour	
MET-17 Horiba Multiline Raman Spectrometer	\$35/hour	\$75/hour	\$165/hour	
NPF-1 DelsaNano Particle Size Analyzer	\$30/hour	\$75/hour	\$165/hour	6
NPF-6 VirTis Lyophilizer	\$2/hr	\$75/hour	\$165/hour	6
NPF-7 Multisizer 3 Coulter Counter	\$10/hour	\$75/hour	\$165/hour	6
PL-4 KLA-Tencor P-16+ Contact Stylus Profiler	\$10/hour	\$75/hour	\$165/hour	6
SLF-4 Transparency Photomask Writer	\$30/hour	\$75/hour	\$165/hour	
SPM-1, SPM-2 Asylum AFMs	\$35/hour	\$75/hour	\$165/hour	
SPM-4 Witek NSOM	\$25/hour	\$75/hour	\$165/hour	
SPM-6 Cypher-AFM	\$35/hour	\$75/hour	\$165/hour	
SPM-8 PIFM Photo Induced Force Microscope	\$25/hour	\$75/hour	\$165/hour	
SPM-11 Neaspec Scattering Near-field Optical Microscope	\$35/hour	\$75/hour	\$165/hour	
SW-1 DISCO Dicing Saw	\$30/hour	\$75/hour	\$165/hour	
XRA-002 X-Tek HMXST 225 MicroCT	\$25/hour	\$75/hour	\$165/hour	
XRA-003 XRF	\$30/hour	\$75/hour	\$165/hour	
XRA-004 K-Alpha XPS/ESCA, XRA-008 K-Alpha+ XPS	\$35/hour	\$75/hour	\$165/hour	
General Nanomaterials Staff Assistance (MSF-044,045)	N/A	\$75/hour	\$165/hour	
Monthly Cap / user (Harvard)	\$2,000 HU	None	none	5, 7
Monthly Cap / user (Non-Harvard)	\$2,600 Non-HU			

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- In addition to actual time used, users will be charged for all unused time reserved in the Scheduling Tool. Charges for unused reservations are not included in the monthly cap.
- CNS staff assistance for all equipment training and certification, preparation of samples, or use of tools not listed above is charged at the General Staff Assistance rate. On-site and remote assistance are not included in cap.
- 30% OH added to total monthly charge for all non-Harvard users and all users not paying with Harvard 33-digit code.
- Daily room charges (G05, G06) are applied in addition to separate hourly or per use tool charges.
- After cap level is reached, additional qualifying expenses are added at 33% of base rate.

Harvard Center for Nanoscale Systems
 ACADEMIC RATES (effective 03/01/17, subject to change)
 Nanofabrication Facilities

INSTRUMENT	Rate/ Unit ⁵	On-Site Staff Assistance	Remote Staff Assistance	Notes
General LISE Cleanroom Access NF-07	\$39/hr max \$117/day	\$75/hour	\$120/hour	6, 10
ALD-1, ALD-4 Savannah Atomic Layer Deposition	\$29/hour	\$75/hour	\$120/hour	
ALD-2 GEMStar ALD and Pulsed CVD	\$29/hour	\$75/hour	\$120/hour	
ALD-3 Philipe-ALD	\$29/hour	\$75/hour	\$120/hour	
CVD-2 Nexx PECVD	\$50/hour	\$75/hour	\$120/hour	
CVD-3 STS PECVD	\$50/hour	\$75/hour	\$120/hour	
CVD-4,5,9,10 Atmospheric Furnace Tubes	\$30/hour	\$75/hour	\$120/hour	7
CVD-6,7,8,11,13 Low-Pressure Furnace Tubes	\$50/hour	\$75/hour	\$120/hour	7
DOE-1 Deep Oxide Etcher	\$50/hour	\$75/hour	\$120/hour	
EE-4 Denton e-beam Evaporator	\$50/hour	\$75/hour	\$120/hour	
EL-1 Raith-150 e-beam Lithography	\$55/hour	\$75/hour	\$120/hour	
EL-3 JEOL 7000F e-beam Lithography	\$50/hour	\$75/hour	\$120/hour	
EL-4 Elionix e-beam Lithography	\$55/hour	\$75/hour	\$120/hour	
EL-5 Elionix e-beam Lithography	\$60/hour	\$75/hour	\$120/hour	
FCB-1 Flip Chip Bonder	\$24/hour	\$75/hour	\$120/hour	
IBE-1 Intlvac Nanoquest II IBE	\$40/hour	\$75/hour	\$120/hour	
MET-01 Toho Stress Measurement System	\$22/hour	\$75/hour	\$120/hour	
MET-05 Hall / Van der Pauw	\$45/hour	\$75/hour	\$120/hour	
MET-12 Quantox non-contact e-characterization	\$45/hour	\$75/hour	\$120/hour	
MET-13 Integrating Sphere/LED Test Set	\$45/hour	\$75/hour	\$120/hour	
MW-1 Heidelberg Mask Writer	\$40/hour	\$75/hour	\$120/hour	7
MW-3 Heidelberg uPG501	\$15/hour	\$75/hour	\$120/hour	7
OL-7 AS200 i-Line Stepper	\$53/hour	\$75/hour	\$120/hour	
OL-9 Nanoscribe	\$30/hour	\$75/hour	\$120/hour	
OL-10 Heidelberg MLA	\$35/hour	\$75/hour	\$120/hour	7
PAO-1 XeF2 Etcher	\$25/hour	\$75/hour	\$120/hour	
PB-2 Lakeshore 1.5K Probe Station	\$45/hour	\$75/hour	\$120/hour	9
RIE-01 South Bay RIE	\$25/hour	\$75/hour	\$120/hour	
RIE-06 Nexx RIE	\$50/hour	\$75/hour	\$120/hour	
RIE-07 Unaxis Shuttleline ICP RIE	\$45/hour	\$75/hour	\$120/hour	
RIE-08 STS ICP RIE,	\$50/hour	\$75/hour	\$120/hour	
RIE-10 Rapier DRIE	\$55/hour	\$75/hour	\$120/hour	
RIE-11 Plasma-Therm Diamond RIE	\$35/hour	\$75/hour	\$120/hour	
RIE-12 Matrix Plasma Asher	\$25/hour	\$75/hour	\$120/hour	
RTP-1, 2 Rapid Thermal Processors	\$30/hour	\$75/hour	\$120/hour	
SC-7 EVG 150 Automated Wafer Coater/Developer	\$20/hour	\$75/hour	\$120/hour	
SP-2, SP-3 6-target / 3-target Sputtering Systems	\$50/hour	\$75/hour	\$120/hour	

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SPM-5 Veeco AFM	\$26/hour	\$75/hour	\$120/hour	
SW-2 Loomis Scriber	\$24/hour	\$75/hour	\$120/hour	
SEM-10 Hitachi SU8230 SEM	\$40/hour	\$75/hour	\$120/hour	
SW-3 Optical Fiber Fusion Splicer	\$45/hour	\$75/hour	\$120/hour	11
TE1, TE3, TE4, TE5, EE3 Evaporators	\$15/hour	\$75/hour	\$120/hour	8
WB-1 Wire Bonder	\$24/hour	\$75/hour	\$120/hour	
WB-2 EVG 501 Wafer Bonder	\$20/hour	\$75/hour	\$120/hour	
WS-02 Layout BEAMER/LAB software	\$30/hour	\$75/hour	\$120/hour	
General Nanofab Staff Assistance NF-02,03	n/a	\$75/hour	\$120/hour	10
Monthly Cap / user (Harvard)	\$2,000 Harvard	none	none	5, 12
Monthly Cap / user (Non-Harvard)	\$2,600 Non-Harv			

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2. The on-site or remote staff assistance rates are in addition to any equipment rate.
3. In addition to actual time used, users will be charged for all unused time reserved in the Scheduling Tool. Charges for unused reservations are not included in the monthly cap.
4. CNS staff assistance for all equipment training and certification, preparation of samples, or use of tools not listed above is charged at the General Staff Assistance rate. On-site and remote assistance are not included in cap.
5. 30% OH added to total monthly charge for all non-Harvard users and all users not paying with Harvard 33-digit code.
6. General LISE Cleanroom Access fee is charged for all entries up to the daily maximum. The General Access fee also covers all cleanroom tools not otherwise listed on the rate sheet as having a separate charge.
7. Does not include masks or wafers. Available from staff for additional fee. Materials costs not included in monthly cap.
8. Users need to provide their own materials
9. User must bring their own liquid helium (see tool web page for details).
10. General LISE Cleanroom Access Fee is not charged for Remote Staff Assistance usage.
11. Staff support is required, additional fee.
12. After cap level is reached, additional qualifying expenses are added at 33% of base rate.