

NUFAB Rates for Academic Users (2023-24)

All universities receive Northwestern Rates

For companies: Multiply by 2

| CATEGORY | RATE | DESCRIPTION |
|---|-------|---------------------------|
| NUFAB_Tech CLEANROOM (CR) FEES | | |
| Hourly Rate (NUFAB Secure Door) | \$ 22 | Per Hour |
| EQUIPMENT FEES | | |
| Acid/Solvent Hoods and Supplied Chemicals | \$ 10 | Per Hour |
| AFM - Bruker Edge | \$ 24 | Per Hour |
| ALD-Arradiance GEMStar-6XT-P | \$ 35 | Per Hour |
| Annealing Furnace - Blue M | \$ 21 | Per Hour |
| Automatic Develop System – Osiris UNIXX S 20 D | \$ 18 | Per Hour |
| Automatic ‘Dry In/Dry Out’ Acid Etch System – Osiris CHEMIXX MASK 30 E | \$ 24 | Per Hour |
| Convection Ovens - Blue-M | \$ 5 | Per Hour |
| Contact Angle Measurement (VCA Optima XE) | \$ 10 | Per Hour |
| Critical Point Dryer - Tousimis | \$ 30 | Per Hour |
| Developer Hood and Supplied Chemicals | \$ - | <i>Included in CR fee</i> |
| Doping-Boron (p-type) - Tystar-2 furnace | \$ 35 | Per Hour |
| Doping-Phosphorus (n-type) - Tystar-3 furnace | \$ 35 | Per Hour |
| DRIE (STS Pegasus) | \$ 58 | Per Hour |
| E-beam Evaporator (AJA) | \$ 47 | Per Hour |
| eBL (Raith) | \$ 81 | Per Hour |
| Electrical Test Station | \$ 30 | Per Hour |
| Ellipsometer-JA Woolam Alpha SE | \$ 24 | Per Hour |
| Flood Exposure | \$ 10 | Per Hour |
| LPCVD Nitride - Tystar-6 furnace | \$ 58 | Per Hour |
| Mask Aligner (Suss MABA6) | \$ 35 | Per Hour |
| Mask Aligner (Suss MJB4) | \$ 24 | Per Hour |
| Maskless Aligner (Heidelberg MLA150) | \$ 70 | Per Hour |
| Maskless Aligner (Heidelberg uPG501) | \$ 47 | Per Hour |
| Optical Microscopes | \$ - | <i>Included in CR fee</i> |
| Optical Profilometer (Zygo NexView) | \$ 35 | Per Hour |
| Parylene Coater | \$ 24 | Per Hour |
| PECVD (STS) | \$ 45 | Per Hour |
| Plasma Cleaner - SAMCO | \$ 18 | Per Hour |
| Profilometer (Dektak 8) | \$ 30 | Per Hour |
| ProtoLaser R (LPKF) | \$ 53 | Per Hour |
| Reflectometer (Filmetrics F20) | \$ 10 | Per Hour |
| RIE (Samco 10NR) | \$ 30 | Per Hour |

| | | |
|--|--------|----------------------------|
| RTA/RTP (Allwin21) | \$ 35 | Per Hour |
| Spinner/Bake Hoods | \$ 10 | Per Hour |
| Sputter (AJA) - non-Gold | \$ 35 | Per Hour |
| Sputter (AJA) - Gold | \$ 80 | Per Hour |
| Thermal Evaporator (Denton) | \$ 35 | Per Hour |
| Thin Film Stress Measurement System - FLX 2320-S | \$ 27 | Per Hour |
| Vacuum Oven - Yes | \$ 10 | Per Hour |
| Wet/dry Oxidation - Tystar-1 furnace | \$ 35 | Per Hour |
| Wire Bonder-Ball (iBond5000) | \$ 24 | Per Hour |
| Wire Bonder-Wedge (WestBond) | \$ 10 | Per Hour |
| XeF2 Etcher | \$ 60 | Per Hour |
| NUFAB_Cook | | |
| NUFAB_Cook Cleanroom Charge (Per Diem) | \$ 40 | Per Day |
| EQUIPMENT FEES | | |
| ALD - Savannah S100 | \$ 74 | Per Hour |
| Baking Plates | \$ - | <i>Included in CR fee</i> |
| E-Beam Evaporator - Auto 306 | \$ 60 | Per Hour |
| E-Beam Evaporator - Auto 500 | \$ 60 | Per Hour |
| F20 Thin Film Analyzer | \$ 16 | Per Hour |
| Hall Effect / Resistivity / I-V Measurements System - HMS 8404 | \$ 41 | Per Hour |
| Lithography hood | \$ 10 | Per Hour |
| Mask Aligner - MA/BA6 | \$ 60 | Per Hour |
| Mask Aligner - Q-4000 | \$ 30 | Per Hour |
| Metricon Prism Coupler | \$ 20 | Per Hour |
| Optical Microscope | \$ - | <i>Included in CR fee</i> |
| RIE 10NR - Samco | \$ 46 | Per Hour |
| RTP - AS-Micro | \$ 74 | Per Hour |
| Sputter III - AJA - Niobium | \$ 40 | Per Hour |
| Wafer Dicing System - ADT 7122 | \$ 77 | Per Hour |
| Wire Bonder-Wedge | \$ 24 | Per Hour |
| TRAINING FEES | | |
| Equipment Training | \$ 126 | Per Trainee, Per Equipment |
| Hands-on Clean Room Training (Access Request) | \$ 126 | Per Trainee |
| Process Support (Tech Assist) | \$ 150 | Per Hour |

NUANCE Center Reservations and Rates policies

Reservations

Using NUcore, <http://www.nucore.northwestern.edu>, reservations can be made by half hour periods for the duration required.

Daytime, Evening & Weekend and Overnight access

'Daytime' is from 8am to 6pm, Monday through Friday. 'Evening & Weekend' access is available for those who have obtained approval by the appropriate instrument manager. Discounts may apply for instruments during these 'off-hours' times. During university holidays, NUANCE is accessible to Users with 'Evening & Weekend' access, though facilities staff may not be available to offer technical assistance.

Early login and late logoff

You are allowed to login 5 minutes earlier than reserved start time; should you require an earlier login, you will need to move your reservation in NUcore. Should you determine that time beyond your reservation is needed, you are required to **extend** your reservation in NUcore. Time beyond the reservation end-time is charged in minutes.

Partly used reservations

If reserved time is not fully used, you will be charged according to reserved time. Do not reserve time more than needed. (If you have a reservation, another user is barred from using the instrument.)

Unused reservation

If you do not login within 30 minutes after your reserved start time, you will be charged a minimum of 1 hour. After this 30-minute period, another user may use the instrument.

Cancelled reservation

You will not be charged if you cancel your instrument, service or training reservation 24 hours or more ahead of your planned start time. You will be charged a set-up fee if you cancel within 24 hours.

Forgot to logout

It is imperative that you log off after your session. If you forget to log off, you will be charged the greater of reserved time or 2 hours.

Report forgotten logouts

If you discover that the previous User forgot to logout and the instrument is no longer in use, you may login.

***Please use caution as a User's experiment might be interrupted if you logoff when the instrument is still in use. If in doubt, please contact a facility manager.

Technical assistance and training fee

Managers post 'technical assistance' and 'training' fees to your NUcore account within 48 hours.

Consumables

Enter your consumable items when logging off instrument. If you forget, a manager may enter it manually.

Machine downtime

You will not be charged if the instrument is marked as 'down', even if you have reserved the instrument. You may request to have the charges waived if the equipment is faulty but not marked as 'down' in NUcore; please contact your facility manager immediately to resolve.

Report equipment problems

When logging off equipment in NUcore, User should check "problem" or "down" if there was problem during the experiment. Facility managers will receive an email notice and fix the problem as soon as possible. Facility managers will also evaluate if the usage charge should be waived due to the problem reported.

Questionable charge

Contact the appropriate instrument manager as soon as possible to discuss any questionable charge. Adjustments must be completed within 90 days to comply with the university policies.

Billing schedule

NUANCE closes each month before sending instrument use charges to NU Accounting. We use the chart strings from your User profile, which are validated against the university's NU Financials database daily.