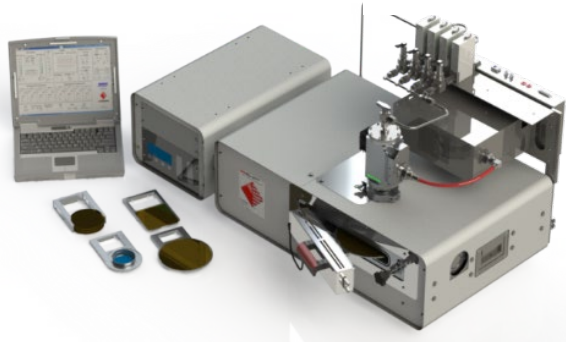


Nanofabrication Research Service Center (NRSC)

NRSC user rates-effective 5/1/23

| Fee description | comments | external | internal |
|--------------------------------|--|------------|----------|
| Daily access fee per user | unlimited entry/re-entry 00:00-24:00 for the date accessed | \$ 30 | \$ 10 |
| Tier 1 hourly equipment fee | per piece of equipment, same rate for training | \$ 45 | \$ 15 |
| Tier 2 hourly equipment fee | per piece of equipment, same rate for training | \$ 60 | \$ 20 |
| Tier 3 hourly equipment fee | per piece of equipment, same rate for training | \$ 75 | \$ 25 |
| Tier 4 hourly equipment fee | per piece of equipment, same rate for training | \$ 90 | \$ 30 |
| Tier 5 hourly equipment fee | per piece of equipment, same rate for training | \$ 105 | \$ 35 |
| Monthly project cap* | external soft cap (internal rate after cap) | \$3,500.00 | \$700.00 |
| Monthly project minimum charge | only billed when facility is accessed | \$ 500 | \$ 100 |

*excludes purchased consumables (e.g. specialty chemicals, deposition materials, substrates, tweezers, notebooks, etc.)



NRSC Equipment Tiers and consumables costs

| Consumable | unit | internal \$/unit | external \$/unit |
|-------------------------------|---------------|------------------|------------------|
| 100mm dia Si test grade wafer | ea | \$ 9.00 | \$ 13.46 |
| Gold PVD | 500 Angstroms | \$ 35.00 | \$ 52.33 |
| Platinum PVD | 500 Angstroms | \$ 35.00 | \$ 52.33 |
| cleanroom notebook | ea | \$ 10.00 | \$ 14.95 |
| wafer tweezers | ea | \$ 36.00 | \$ 53.82 |
| diamond scibe | ea | \$ 17.00 | \$ 25.42 |
| kapton tape | roll | \$ 9.00 | \$ 13.46 |

| Equip | Module | Tier |
|---|-----------------|------|
| NRSC Teaching Bay SS Hood | Etch | 0 |
| NRSC Vacuum Oven | Thermal | 0 |
| NRSC Teaching Bay Four Point Probe | Metrology | 1 |
| NRSC Axiotron Microscope | Metrology | 1 |
| NRSC Olympus Microscope | Metrology | 1 |
| NRSC Oxidation Furnace-Dry | Thermal | 1 |
| NRSC Oxidation Furnace-Wet | Thermal | 1 |
| NRSC HMDS Oven | Lithography | 1 |
| NRSC Chimera wet hood | Etch | 1 |
| NRSC 3-Zone Tube Furnace | Thermal | 2 |
| NRSC Teaching Bay Lithography Stations | Lithography | 2 |
| NRSC Teaching Bay PVD | Deposition | 2 |
| NRSC Teaching Bay NRP-4000 Etch/PVD tool | Etch/Deposition | 2 |
| NRSC Hydra wet hood | Etch | 2 |
| NRSC Probestation (Zeus) | Metrology | 2 |
| NRSC PE50 O2 Plasma Asher | Etch | 2 |
| NRSC Teaching Bay F20 Filmetrics | Lithography | 2 |
| NRSC Teaching Bay N-Type (P) Doping Furnace | Thermal | 2 |
| NRSC Teaching Bay P-Type (B) Doping Furnace | Thermal | 2 |
| NRSC Teaching Bay Etch Station | Etch | 2 |
| NRSC F50 FILMETRICS | Metrology | 2 |
| NRSC Surface Profilometer | Metrology | 3 |
| NRSC PECVD | Deposition | 3 |
| NRSC Wafer Bonder | Lithography | 3 |
| NRSC SuSS MJB4 Contact Aligner | Lithography | 3 |
| NRSC RTP | Thermal | 3 |
| NRSC Xanthos Hood | Lithography | 3 |
| NRSC AJA Magnetron Sputter | Deposition | 4 |
| NRSC PEALD | Deposition | 4 |
| NRSC Oxford ICP/RIE | Etch | 5 |
| NRSC Ebeam Evaporator | Deposition | 5 |