## RSC-NRF Rates effective July 1<sup>st</sup> 2015

All rates are user rates, additional charge applied for staff operation of tools For external rates, see the notes section at bottom.

NOTE   Training ad-hoc (fluctuation   Training Acheduled (fluctuation   Training ad-hoc (fl
Acid Bench (peneral use) - left
Acid Bench (general use) - left
Acid Bench (RCA) - Amerimade
Asher - Anatech Barrel SCE600
Bruker Optical Profilemeter
Dicing Saw - ADT
Dicing Saw - ADT - Blade changing training   25.00   90.00
E-beam evaproator - PVD
E-Beam Lithography - Raith 150 (rate includes development of pattern)  12.50  229.00  NA 4 day tr  17.00  229.00  NA 4 day tr  18.00  18.00  18.00  18.00  18.00  18.00  32.00  30.00  30.00  30.00  30.00  30.00  30.00  30.00  30.00  30.00  4
Ion Beam Lithography (FIB) with Multi Species - Raith ionLiNE
Ellipsometer, J.A. Woolam
Flexus 2320 - wafer bow measurement   5.00   16.00   35.00
Four Point Probe - Veeco FPP-5000   0.00   0.00   0.00   0.00
Furnace Tube, Thermcraft, General Hot Process   5.00   32.00   70.00
Furnace Tube, Tystar #1 Wet and dry Ox         6.00         33.00         74.00           Furnace Tube, Tystar #2 dry Ox and Annealing         6.00         33.00         74.00           Furnace Tube, Tystar #3 LPDCV Nitride (staff run)         not in service           Furnace Tube, Tystar #4 Poly sil and doping (staff run)         not in service           Hall Effect Electronic Measurement - Lakeshore 7507         5.00         32.00         70.00           HMDS hotplate         0.00         Training perfromed with spinners           Lapper/Polisher         0.00         13.00         25.00           Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)         11.00         80.00         188.00           Mask Aligner - Karl Suss MA6 (rate includes development of pattern)         11.00         60.00         141.00           Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)         12.00         82.00         196.00
Furnace Tube, Tystar #2 dry Ox and Annealing  Furnace Tube, Tystar #3 LPDCV Nitride (staff run)  not in service  Furnace Tube, Tystar #4 Poly sil and doping (staff run)  Hall Effect Electronic Measurement - Lakeshore 7507  ### Double Training perfromed with spinners  Lapper/Polisher  ### Double
Furnace Tube, Tystar #3 LPDCV Nitride (staff run)  Furnace Tube, Tystar #4 Poly sil and doping (staff run)  Hall Effect Electronic Measurement - Lakeshore 7507  Lapper/Polisher  Lapper/Polisher  Duby Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)  Mask Aligner - Karl Suss MA6 (rate includes development of pattern)  Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)  not in service  not in service  32.00  70.00  Training perfromed with spinners  13.00  25.00  13.00  80.00  188.00  189.00  196.00
Furnace Tube, Tystar #4 Poly sil and doping (staff run)  Hall Effect Electronic Measurement - Lakeshore 7507  5.00  32.00  70.00  HMDS hotplate  0.00  Training perfromed with spinners  Lapper/Polisher  0.00  Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)  11.00  Mask Aligner - Karl Suss MA6 (rate includes development of pattern)  11.00  Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)  12.00  82.00  196.00
Hall Effect Electronic Measurement - Lakeshore 7507         5.00         32.00         70.00           HMDS hotplate         0.00         Training perfromed with spinners           Lapper/Polisher         0.00         13.00         25.00           Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)         11.00         80.00         188.00           Mask Aligner - Karl Suss MA6 (rate includes development of pattern)         11.00         60.00         141.00           Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)         12.00         82.00         196.00
HMDS hotplate         0.00         Training perfromed with spinners           Lapper/Polisher         0.00         13.00         25.00           Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)         11.00         80.00         188.00           Mask Aligner - Karl Suss MA6 (rate includes development of pattern)         11.00         60.00         141.00           Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)         12.00         82.00         196.00
Lapper/Polisher         0.00         13.00         25.00           Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)         11.00         80.00         188.00           Mask Aligner - Karl Suss MA6 (rate includes development of pattern)         11.00         60.00         141.00           Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)         12.00         82.00         196.00
Mask Aligner - EVG Model 620 w/BSA (rate include development of pattern)     11.00     80.00     188.00       Mask Aligner - Karl Suss MA6 (rate includes development of pattern)     11.00     60.00     141.00       Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)     12.00     82.00     196.00
Mask Aligner - Karl Suss MA6 (rate includes development of pattern)  11.00 60.00 141.00 Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern) 12.00 82.00 196.00
Maskless Laser Writer - Heidelberg DWL-66 (rate includes development of pattern)  12.00  82.00  196.00
Micro Raman - Horiba Aramis         11.00         60.00         141.00
MOCVD for GaN, ZnO, Si, C - SMI Nano-H CVD         7.00         3         TBD         TBD
Nikon cleanroom microscope with digital image capture 0.00 13.00 25.00
Oven, Image Reversal/HMDS - YES 8.00 Training perfromed with spinners
PECVD SiNx, SiO2, Amorphous Si - STS 310PC 12.00 41.00 98.00
Photospectrometer - Filmetrics F40         5.00         16.00         35.00
Probe station, 5 pt probe         0.00         13.00         25.00
Profilometer - Dektak 150         11.00         40.00         94.00
Profilometer - Tencor Alpha-Step-500         5.00         16.00         35.00
RIE, Deep Si - STS 12.00 103.00 245.00
2.000
RIE/ICP - Unaxis SLR 12.00 41.00 98.00

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RTA - Steag 100CS RTP	11.00		
RTA - Solaris 150	11.00		
SEM - FEI Nova NanoSEM 430 with CL	15.00		
SEM - FEI Nova NanoSEM 430 with CL - CL training for above			
SEM - JEOL 5700 CarryScope	11.00		
Solvent bench 1, lift off	0.00		Trainin
Solvent bench 2, lift off	0.00		train
Spin Coater - Headway, E-Beam Bay (rate includes soft/hard bake & basic litho chemicals)	8.00		
Spin Coater - Laurell, E-Beam Bay (rate includes soft/hard bake & basic litho chemicals)	8.00		all spinner
Spin Coater - Laurell, Litho Bay (rate includes soft/hard bake & basic litho chemicals)	8.00		all spinner
Spin Coater - Headway, Litho Bay (rate includes soft/hard bake & basic litho chemicals)	8.00		all spinner above)
Spin Coater - Suss, Delta 80 (rate includes soft/hard bake & basic litho chemicals)	11.00		all spinner above)
Sputter Deposition - KJL CMS-18 Multi-Source	12.00	2	
Wafer Bonder, EVG 501	8.00		
Wire Bonder, Gold Ball	8.00		
Wire Bonder, Wedge (staff run; there are additional charges for staff time)	8.00		staff
Per Run Rate Tools	(\$/run)		
ALD - Cambridge Nanotec Fiji	90.00	3	
Critical Point Dryer (includes dedicated acid bench and CPD tool)	60.00	4	
SCS Parylene Coater	25.00	5	
Other Charges			
Additional Analysis ,Reporting, Sample Prep- Technician Time (per hour)	50.00		
Cleanroom entry fee (per day)	15.00		
	1		1

## Notes:

Technician time (per hour)

- 1. \$35 consumable surcharge per use for RCA bath fills
- 2. Consumable surcharge (per Å) for the following precious metals: Au, Pt, Pd, Ir, Ru, Ag

  All other materials included in hourly rate.
- 3. Consumable surchage calculated based on usage
- **4.** Consumable surchage \$15 to cover acids, alcohols and CO2
- **5.** Run includes up to 7gm of parylene. Additional Parylene can be purchased for thicker films.

All tools are billed based on 15 min increments unless otherwise noted

## External Rates:

Internal UF Customers pay Base Rates

Other Academic Institutions, Government labs, and UF-Affiliated Companies pay 1.5 x Base Rates

Non-Affiliated Companies pay 2.0 x Base Rates, daily cleanroom fee is \$20

The external non-affiliate rate for the FEI SEM and the Horiba micro-Raman are \$50/15min

\*\*\* Refer to External Rate Policy for more information and exclusions

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20.00	47.00			
40.00	94.00			
90.00	220.00			
90.00	220.00			
40.00	94.00			
Training perfromed with spinners				
training is part of orientation				
54.00	123.00			
all spinners trained together (rates above)				
all spinners trained together (rates				
above) all spinners trained	d together (rates			
above)	a together (rates			
all spinners trained together (rates				
above)				
62.00	147.00			
36.00	82.00			
107.00	285.00			
staff run				
Stan Tun				
55.00	140.00			
85.00	175.00			
52.00	113.00			

50.00

NRF Store consumables	price each
100mm Si wafer - Prime grade	22.18
100mm Si wafer - Test Grade	12.18
50mm Si wafer - test grade (n-type)	10.00
50mm Si wafer - test grade (p-type)	10.00
50mm Sapphire wafer - single side polished	31.81
4" mask blank - sodalime glass, Cr (includes mask holder)	19.42
4" mask blank - sodalime glass, FeO (includes mask holder)	42.29
4" mask blank - quartz glass, Cr (includes mask holder)	85.25
5" mask blank - sodalime glass, Cr (includes mask holder)	26.11
5" mask blank - sodalime glass, FeO (includes mask holder)	49.50
5" mask blank - quarts glass, Cr (includes mask holder)	100.50
2" square acrylic sample box (sold as a 10 pack)	2.50
50mm single wafer shipper - epak (sold as singles)	2.75
75mm single wafer shipper - epak (sold as singles)	3.75
100mm single wafer shipper - epak (sold as singles)	4.80
100mm graphene support wafer 300nm SiO2/Si (includes single wafer shipper)	38.74