

# **SEM Usage Policy**

## **(Zeiss Supra 55 VP with Genesis 4000 EDAX)**

Revised: September 1, 2010

### **Goal:**

To increase usage and availability while maintaining excellent condition of the instrument so that it consistently meets all resolution specifications.

### **Hours of Operation:**

Facility operates from 8 a.m. to 8 p.m. on week days only (excluding UTA holidays).

Facility is available to experienced and qualified users on 24/7 basis.

### **24/7 Access Policy:**

24/7 access is available to qualified and experienced users. Sixty hours of hands-on after training experience on SEM is required without violations. Apply by sending an email to [nanofab@uta.edu](mailto:nanofab@uta.edu) if you have accumulated these hours and would like 24/7 access.

### **Maximum number of trained users (excluding staff) at any one time:**

There is no restriction on number of trained users per faculty group.

### **Prerequisites for training:**

1. Trainee must be supervised by a UTA graduate faculty member.
2. Trainee must be M.S./Ph.D./Post-doc level.

### **Training:**

1. Training will be done measuring real samples provided by the trainee.
2. Theory will be explained.
3. Equipment will be described in detail.
4. Software and all its capabilities will be described.
5. Trainee will learn to use and follow SOP.
6. There will be at least six training sessions before restricted independent use will be allowed.
7. All six training sessions should be completed within a four week period.
8. If a user does not use the equipment for an entire quarter, he or she might have to go through the training again.

### **Training Charges:**

\$450 per user.

### **Usage Charges:**

Charging will be done on quarterly basis. The first quarter of the year starts on Sept. 1<sup>st</sup>.

Rate: \$45 per hour.. For 'cap' please see the table below.

### **Staff-assisted Measurements:**

These are available at the same rates and 'cap' as in the table below.

# **E-beam Writer/FIB Usage Policy (Zeiss Cross Beam 1540 with Nabity Writer)**

Revised: March 24, 2008

## **Goal:**

To increase usage and availability while maintaining excellent condition of the instrument so that it consistently meets all resolution specifications.

## **Hours of Operation:**

Facility operates from 8 a.m. to 8 p.m. on week days only (excluding UTA holidays).  
Facility is available to experienced and qualified users on 24/7 basis.

## **24/7 Access Policy:**

24/7 access is available to qualified and experienced users. 60 hours of hands-on after training experience on FIB/E-beam Writer is required without violations. Apply by sending an email to [nanofab@uta.edu](mailto:nanofab@uta.edu) if you have accumulated these hours and would like 24/7 access.

## **Maximum number of trained users (excluding staff) at any one time:**

There is no restriction on number of trained users per faculty group.

## **Prerequisites for training:**

1. Trainee must be supervised by a UTA graduate faculty member.
2. Trainee must be M.S./Ph.D./Post-doc level.
3. Trainee must be an authorized SEM (Zeiss Supra 55VP) user.

## **Training:**

1. Training will be done measuring real samples provided by the trainee.
2. Theory will be explained.
3. Equipment will be described in detail.
4. Software and all its capabilities will be described.
5. Trainee will learn to use and follow SOP.
6. There will be at least six two-hour training sessions before restricted independent use will be allowed.
7. All six training sessions should be completed within a four-week period.
8. If a user does not use the equipment for an entire quarter, he or she might have to go through the training again.

## **Training Charges:**

None.

## **Usage Charges:**

Charging will be done on quarterly basis. The first quarter of the year starts on September 1st.  
Rate: \$70 per hour. For 'cap' please see the table below.

## **Staff-assisted Measurements:**

These are available at the same rates and 'cap' as in the table below.

## USAGE FEE SCHEDULE FOR ACADEMIC USERS FROM UTA

All hourly fees are per person (student, post-doc). Minimum time unit is 1 hr.

All supplies and consumables are to be provided (subject to the approval of the NanoFab management) by the user except for those provided by NanoFab. Consumables specific to equipment might have to be purchased from NanoFab. A list of consumables provided free of charge and those to be purchased from NanoFab is provided upon request.

<i>Equipment / Service</i>	<i>New User fee</i>	<i>Usage, Assisted Usage, Training (Prior on-site training required) /hr</i>	<i>Maximum per quarter per faculty</i>	<i>Policy for maximum fee</i>	
Monthly Access Fee		None			
General Lithography / Patterning	None	\$50	\$1,000	can be combined with usage of other common equipment in NanoFab towards max. fee of \$1,500/quarter/group.	
General Wet Chemistry	None	\$50			
RF / DC Sputtering	None	\$50			
Thermal Evaporation	None	\$50			
PLD / Laser Annealing	None	\$50			
E-Beam Evaporation	None	\$50			
PECVD	None	\$50			
DRIE	None	\$50			
RIE (III-V)	None	\$50			
AFM	None	\$50			
RTA	None	\$50			
Dicing Saw	None	\$50			
E-Beam Writer*	\$450	\$80			\$1,000
FIB *		\$80			
SEM / EDAX *		\$50	\$1,000		
Safety Training (required)	None	free	-	-	
NanoFab Tours / Usage Assessment	None	free	-	-	

# Application to Use UTA NanoFAB SEM/EDS/FIB/E-beam Writer Facilities

Internal form only for UTA faculty to request training and access to NanoFAB Facilities

Name of the User (Student or Post-Doctoral Associate):

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Please check one box.

- Self Usage (\$450 training charge applies)
- Staff-assisted Usage

UT-ID #: \_\_\_\_\_

UTA E-Mail address: \_\_\_\_\_

Tel No: \_\_\_\_\_

Residence Address:

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Name of Project:

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Please provide the following information about the samples (attach extra sheets if needed):

Samples' structure and materials in the samples (describe each type of samples separately and provide sketches if relevant)

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Sample sizes

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How will the samples be prepared?

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# Application to Use UTA NanoFAB SEM/EDS/FIB/E-beam Writer Facilities

Internal form only for UTA faculty to request training and access to NanoFAB Facilities

Types of measurement/process that need to be performed

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Note: New form needs to be submitted and approved if samples' type changes

### **Some guidelines about the samples:**

Samples must be high vacuum (10<sup>-6</sup> Torr) compatible and prepared in clean environment.

Preferred sample size is 1 cm x 1 cm or smaller.

Samples should not have any loose structures or powders that can be blown away by 10 psi nitrogen.

For cross sections, epoxies used must also be high vacuum compatible such as Araldite or Petropoxy. Thickness of polished blocks should be kept to a minimum.

### **User:**

I certify that I am a full-time graduate student under the supervision of a UTA Graduate Faculty. I agree to abide by the NanoFAB Safety and Operating Procedures. I understand that such access can be revoked by the NanoFAB Director or Manager in the event these procedures are violated.

\_\_\_\_\_  
User Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

### **Faculty:**

I certify that I am a UTA Graduate Faculty supervising the graduate student or post-doctoral associate named above on the project summarized in this form. I also certify that the user meets all the criteria described in the attached Usage Policy.

I understand that such access can be revoked by the NanoFAB Director or Manager in the event the person fails to follow NanoFAB rules and procedures.

\_\_\_\_\_  
Graduate Faculty Advisor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Approved: \_\_\_\_\_  
Manager, NanoFAB

\_\_\_\_\_  
Date