

Guidelines and Agreement for MaCS Usage

Scheduling can only be performed by individuals who have been granted login credentials by the Laboratory Lead, Lab Business and Operations Manager, or Instrument Leads. These credentials are based on the individual having an approved project to be performed in MaCS.

For customer convenience, scheduling is performed online. Without special approval, instruments can only be scheduled during normal operating hours (Monday-Friday 8:00 am to 4:00 pm). Radiological (rad) sample analysis scheduling requests are pending until they are approved by the Authorized User or Safety Officer. The Authorized User or Safety Officer ensures that radiation safety office support is available for the requested time for instrument use.

You should only schedule time on the calendar after you have received approval on your sample request from Lab Lead and Instrument Lead (and Authorized User or Safety Officer, if rad). We ask that you only schedule out 3 months (12 weeks). See scheduling guidelines below. Please contact Lab Business and Operations Manager and/or Instrument Leads if you need to schedule out more than 3 months.

If a radiological sample, your RPR13F form must be approved and your samples must be ready to ship to CAES. The approval of your RPR13F will be completed by the Authorized User (Jatu Burns). It takes 10 working days to approve a rad shipment to and from CAES. For the Authorized User to obtain approval for the rad samples you must provide the information listed below 10 days prior to estimate ship date. Email the information to Jatupornburns@boisestate.edu

- 1.) Name of each sample
- 2.) Mass of each sample
- 3.) Isotopes in each sample
- 4.) Isotope activities in each sample
- 5.) Chemical composition of each sample
- 6.) On contact dose rate
- 7.) Dose rate at 30 cm
- 8.) Estimate date that the samples will be shipped out of CAES
- 9.) Upon completion of the analysis, will the sample be returned to the origin, transferred to other institution, or be disposed?

Every effort should be made to send samples as clean as possible (i.e. minimize the removable contamination). The shipper must follow all applicable DOT shipping requirements and inner containers including sample holders will be less than 7 dpm/100cm² alpha, and 70 dpm/100cm² beta/gamma. If the measured activity levels of materials are not consistent with the types and levels specified in the shipping manifest and approved RPR13, if the sample containers are at all compromised, or the number of, or labeling of samples do not match the information provided by the researcher/shipper, the materials will be immediately returned to the shipper.

Users who continuously schedule more time than they need will be charged for all the time they schedule. For example, if you over scheduled 8:00 am-4:30 pm but only used the instrument from 8:00 am to 10:00 am you will be charged the 8.5 hours not the 2 hours of use. The instruments are at a high demand and others need to use them. Be courteous when scheduling time, and only schedule the time you know when you need each instrument. These instruments are in high demand and we strive to treat all our researchers equally. If scheduled use is not canceled at least 24 hours in advance, then the customer is charged for the time at the requested level of service.

If an instrument is not available due to repairs or maintenance, we will work closely with the user to ensure they are able to complete their work in a timely manner.

It is the customer’s responsibility to provide the charge number, budget number, PO information, or NSUF project number to the instrument lead/sample prep lead/operator and/or to the MaCS usage log.

Normal Operating Hours

Normal operating hours for sample preparation and imaging activities are Monday – Friday 8:00 am – 4:30 pm. Instrument time will be schedule in blocks of time.

FIB:	8:00-12:00	1:00-4:00	4:00-midnight
TEM:	8:30-12:30	1:00-4:00	4:00-midnight
LEAP:	9:00-12:30	1:00-4:00	4:00-midnight
SEM:	8:30-12:30	1:00-4:00	4:00-midnight
XRD:	9:00-4:00	(There is no off hour access to the XRD or Sample Prep)	
Sample Prep:	8:30-12:00	1:00-5:00	
(Non-rad)			
Sample Prep:	10:00-12:00	1:00-4:00	
(rad)			

Suggested Scheduling Time

Instrument	Number of Samples	Suggested Hours to Schedule
TEM	1 sample	4 hours
FIB	Preparing 1 TEM Sample	4 hours
	Preparing 1 LEAP Coupon (6 tips)	4 hours

Researchers can schedule

- 2 normal working days a week for the FIB and TEM; a maximum of 4 days a month.
- 3 normal working days a week for the LEAP, SEM, and Nano Indenter and a maximum of 6 days a month.

Radiological samples must be moved into and out of the instruments between 8:00 am-4:00 pm during normal working days with the assistance of the Instrument Lead and Authorized User, Radiation Safety Officer, or designated alternative.

Researchers *if given authorization* by Instrument Lead and Lab Lead may analyze or prepare samples using the instruments off hours. However, sample movement or opening of the sample chamber is prohibited.

Presentation Guidelines

When presenting the data collected at MaCS we ask that you reference the Center for Advanced Energy Studies-Microscopy and Characterization Suite (CAES-MaCS), the Instrument Leads (Jatuporn Burns and Dr. Yaqiao Wu, Boise State University), and Co-Instrument Lead (Megha Dubey) if they contributed significantly to your research. If the research was performed because of a NSUF award, please also acknowledge them on the presentation.

For additional information or clarification contact:

- Jeremy Burgener, MaCS Business and Operations Manager (jeremyburgener@boisestate.edu)
- Yaqiao Wu, MaCS Director/Lab Lead and TEM and LEAP Instrument Lead (yaqiaowu@boisestate.edu)
- Jatuporn Burns, FIB, SEM, and Nanoindenter Instrument Lead (Jatupornburns@boisestate.edu)
- Megha Dubey, Assist with SEM and FIB (meghadubey@boisestate.edu)

Refer to MaCS Hourly Equipment and Service Rates for cost per hour for instrument lead, sample prep lead, and instrument cost per hour.

<https://caesenergy.org/research/laboratories/macs/rates-table-text/>

Damaging Equipment

It is extremely important that Researchers are careful with the instruments in CAES. If a researcher damages an instrument they don't only impact their research but they impact others' research due to down time of the instrument.

- A researcher is responsible for notifying the Lab Lead, Instrument Lead, and PI as soon as possible if they damage an instrument.
- The researcher will be responsible for the cost of the repair work. This could include the cost of the part, the cost of the services engineers travel and time to be at CAES, and the loss due to others not being able to use the equipment.
- At any time you are in doubt **CALL THE INSTRUMENT LEADS.**

EXPORT CONTROL INFORMATION

By mutual agreement of all CAES institutions, CAES does not perform research that is subject to export control regulations. In accordance with this agreement, no one may bring any materials that fall under the jurisdiction of the International Traffic in Arms Regulations (ITAR) to CAES facilities.

In addition, if research or testing on technology that is subject to the jurisdiction of the Export Administration Regulations (EAR) would result in the disclosure of information that is restricted for transfer under the EAR, the Department of Energy regulations (10 CFR Part 810), the Nuclear Regulatory Commission regulations (10 CFR Part 110) or other U.S. export control regulations, and is not otherwise publicly available, or would otherwise result in a deemed export of controlled technology, that research or testing may not take place at CAES.

I hereby certify that this request does not involve ITAR-controlled technology and will not result in the disclosure of non-publicly available proprietary technology or software in violation of U.S. export control laws.

Note: If you need assistance in determining the export control status of your items or materials please contact your organization's export control officer or legal counsel for advice.

Sign and return the form to the Lab Lead or by click I have read and understand in the CAES Training Access Management System.

Print Name: _____ Sign Name _____ Date: _____