

Materials Characterization Core at Drexel University

User Handbook

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1. Introduction

Welcome to the Materials Characterization Core at Drexel University.

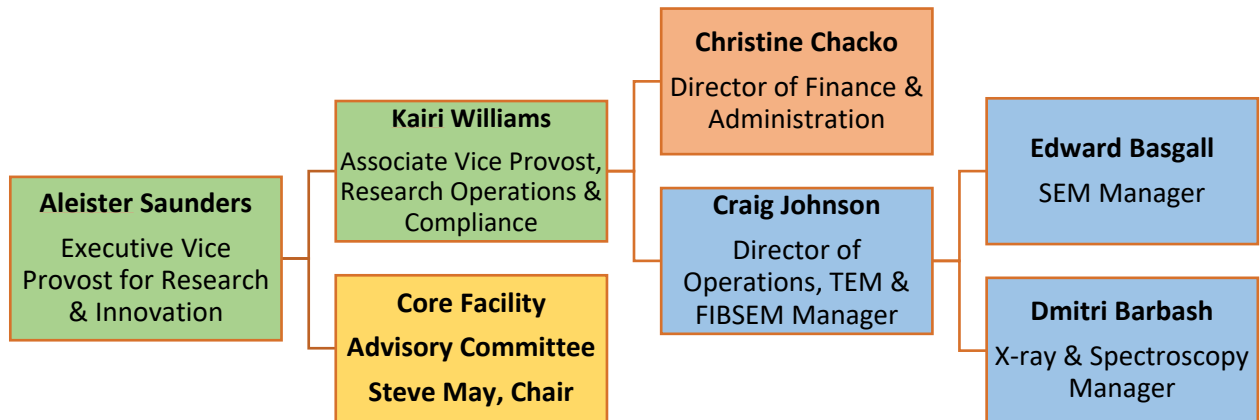
Our mission is to facilitate discovery and innovation by serving Drexel University and its academic, industry and national laboratory partners through support of and access to advanced instrumentation, training, expertise and analysis.

The facility offers around-the-clock access to high-quality research instrumentation for materials characterization. Performance of instrumentation is ensured by timely maintenance, routine service, monitoring by staff and responsible usage. The facility is staffed by highly-trained professionals who provide training, research consultation and assistance.

This handbook contains information about our facility, our policies and guidelines for users to have a successful research experience in the MCC.

2. Organization

The Materials Characterization Core administratively reports to the Office of Research under the leadership of the Executive Vice Provost for Research & Innovation.



3. Contact Information

Kairi Williams, MBA Associate Vice Provost for Research Operations and Compliance Office of Research & Innovation	Bellet Building, 10th floor, Office 1036 1505 Race Street Philadelphia, PA 19102 215-895-6080 kdw38@drexel.edu
Craig Johnson, PhD. MCC Director of Operations Manager TEM and FIBSEM	Bossone Building 212 3141 Chestnut St Philadelphia, PA 19104 215-895-5900 clj46@drexel.edu
Edward Basgall, PhD. Electron Microscopy Technician, Manager SEM	Bossone Building, Office 115 3141 Chestnut St Philadelphia, PA 19104 215-895-2379 ejb63@drexel.edu
Dmitri Barbash, PhD. Senior Research Scientist Manager XPS and X-ray Diffraction	Bossone Building, Office 112 3141 Chestnut St Philadelphia, PA 19104 215-571-4611 dvb36@drexel.edu
Christine Chacko Director of Finance & Administration Office of Research & Innovation	Bellet Building, 10th floor, Office 1036 1505 Race Street Philadelphia, PA 19102 215-762-2935 cchacko@drexel.edu

4. Advisory Committee

The MCC Advisory Committee is charged by the Executive Vice Provost for Research & Innovation (EVPRI), comprised of Drexel faculty, staff and users, with the express purpose of advising the MCC Director of Operations and the EVPRI to help the facility develop and meet its strategic, financial and operational goals. The current membership of the MCC Advisory Committee is posted on the MCC website.

5. iLab Accounts

All users must register for an iLab account. You can access the iLab system at <https://drexel.ilab.agilent.com/>. iLab is used for accounting, scheduling instruments and tracking usage. Users and their advisors have accounts and advisors can access many group level management functions.

6. Safety training

All MCC users must complete Drexel Online Safety Training requirements before they are given access to equipment in the MCC. Upon receipt of your Access Request Form, the instrument manager will add your name to the MCC users list in BioRAFT. If you have not completed the safety training or your safety training has expired, you will receive an automated reminder to complete it.

<http://drexel.edu/facilities/healthsafety/training/>

7. Rates and Fees

The MCC charges hourly rates for instrument time, staff assistance and training. The rates are published on the MCC website. Rates may change each year and new rates will be announced in January of the preceding fiscal year. Rates are calculated in compliance with the OMB Uniform Guidance for service centers, are cost neutral and based on actual expenses and usage of the instruments. The current rates and fees table is posted on the MCC website.

8. Accounting

All users are responsible for using current account numbers (fund-org) in the iLab system. Users should choose the appropriate account number when reserving time or logging into the instrument. Advisors will receive statements listing expenses for their group members. PIs can access their group's usage statistics through iLab.

9. Payment

Typically, internal MCC instrument time and training/assistance charges are automatically debited from the accounts provided by the users. Principle Investigators will receive monthly statements of usage and charges for their groups and accounts. Payments can also be made by check or credit card. Credit card payments can be made online. Checks must be made payable to Drexel University and mailed to the instrument manager's attention at Drexel University Materials Science, LeBow 344, 3141 Chestnut St, Philadelphia, PA 19104.

10. Instrument training and certification

Users of MCC instrumentation receive training that ensures competence in the basic operation of the instruments and serves as a foundation for more advanced applications.

- Certification by the instrument manager is required before unsupervised use of the instruments.
- The amount of training depends on the needs and experience of the users. Instrument managers can provide training-time estimates, but the total training time will be at the instrument managers discretion.
- Certification automatically expires after 180 days of inactivity. Please send requests for reactivation to the instrument manager.
- Continued access to the MCC instrumentation is at the discretion of the instrument manager. Additional training may be required if the instrument manager deems it necessary.
- Night and weekend access to the instruments is at the discretion of the instrument managers.

11. Scheduling Instrument Time

Instrument time can be reserved using the iLab system using any internet connected PC or mobile device. When time is scheduled, users are prompted to choose the appropriate account (by project name), the start and end times for the reservation and check any accessories. When the start and end times are selected, the reservation dialog box displays an estimated cost for the reservation.

The iLab system allows for walk-in reservations if the instrument is available.

Accurate estimates of work time are essential to efficient utilization of the instruments. Please schedule an appropriate amount of time for your anticipated work.

Instrument managers set the scheduling increment, how far in advance reservation can be made and how many hours a user can schedule in a given time period. If you have questions about these limits, please contact the instrument manager.

12. Log On Policies

Users must activate their accounts in iLab. The iLab system allows approved users to schedule instrument time, log onto instruments and tracks instrument usage.

- Users must log on and log off instruments at the actual start and end times of their sessions and use paper logs.
- DO NOT remotely log on to an instrument and show up later

- DO NOT forget to log off at the end of your session
- DO NOT use an instrument when another user is logged in
- DO NOT use your credentials to log on for another user
- DO NOT bypass the log in system for any reason
- Notify manager if there is an issue with iLab

13. No Shows & Late Cancellations

Repeated failure to show up for scheduled appointments, late cancellations or late arrivals to appointments may result in a loss of scheduling privileges. Please cancel reservations at least 24 hours in advance if possible.

14. Instrument Downtime

If the instrument is not working normally or is down, time will not be billed. If you are using an instrument and an instrument-related problem occurs that you cannot resolve, contact instrument manager immediately. If instrument manager is not available, please log out of the instrument. Leave notes in iLab and in the paper log about the problem. MCC staff will determine if the instrument is not functioning normally and will adjust billing accordingly. If you do not alert the manager about the problem, your time may be billed. If the instrument is already marked "Offline" in iLab, your time will not be billed.

15. Damages to MCC Equipment

Users are responsible for the MCC instruments for the duration of their reservation or actual usage (whichever is longer). Even if you do not show up to use the instrument you are responsible for its condition. Any costs incurred for repair or replacement of parts and equipment caused by improper or negligent use will be borne by the principle investigator sponsoring the user, and will be automatically charged to the account number provided by the user on instrument access form unless an alternate fund number is provided.

16. Visitors

Collaborators and colleagues are welcome to accompany authorized users during work on the MCC instruments provided the following rules are complied with:

- The accompanying person does not operate the instruments or prepare samples in the MCC.
- The authorized user must remain with the accompanying person at all times when in the MCC.

The individual is not under the age of 18 years old unless he/she is participating in an event approved by Drexel Environmental Health & Safety. For more details see [Drexel's Visitor Policies for Minors](#)

17. Use of Facility Instruments for Drexel Courses, Tours, and Outreach Events

The MCC is an important resource for Drexel's academic mission, including recruitment and outreach.

- Academic Units are welcome to take advantage of our facility for courses and class demos. Please make sure that all such usage is coordinated through the MCC Director of Operations. Demos and coursework led by approved instrument users will be charged at the internal instrument hourly rate. Demos and coursework led by MCC staff will be charged at the internal instrument rate plus \$50/hour for staff assistance.
- Tours and demonstrations for Academic Units, Colleges and other organizations should be coordinated through the MCC Director of Operations. The MCC staff may be available to assist with tours if requested. Events involving instrument demonstrations led by approved instrument users will be charged at the internal instrument hourly rate. Demonstrations led by MCC staff will be charged at the internal instrument rate plus \$50/hour for staff assistance.

18. Data Management

Electronic research notebooks (ERNs) help researchers to manage the results of research efforts, record and document research processes and procedures, and manage digital research data in ways that increase reproducibility, efficiency, collaboration, searchability, and security.

Drexel University has purchased an enterprise license for LabArchives electronic research notebook (ERN) services for use by its faculty, researchers, staff, graduate students, and undergraduate students in performing or learning research activities.

Learn more about Electronic Research Notebooks here:

<https://drexel.edu/research/resources/electronic-research-notebooks/>

19. Acknowledgements

The MCC provides access to shared research instrumentation to users and faculty and facility staff provide essential services and guidance to facility users. Proper acknowledgment of staff helps them advance their careers. Acknowledgments of the facility serve as a metric for assessing the value of the facility and its staff to Drexel's research and educational missions and impact financial support for operations and expansion.

- **Core Acknowledgment** – If the research reported includes data obtained on MCC instruments, please include an acknowledgement of the "Materials Characterization Core at Drexel"

University” in the publication. Sample acknowledgment: “SEM and TEM analyses were performed using instruments in the Materials Characterization Core at Drexel University.”

- **Equipment Funding Acknowledgment** – MCC instruments acquired through grants may require acknowledgments that include a specific award number. Current instrumentation grants will be listed on this page and in documentation provided by staff.
- **Staff Acknowledgment** – If a facility staff member provided support through advanced training, sample preparation or guidance in experimental design or data analysis, please include the staff member in the acknowledgment as well as the MCC. Sample staff acknowledgement: “We thank the Dr. Dmitri Barbash for expert assistance with XPS experiments and analysis.”
- **Staff Co-authorship** – Please discuss co-authorship with facility staff in cases where they have made (or are asked to make) a significant and essential intellectual contribution to a research project submitted for publication.

20. User and Principle Investigator Feedback

We encourage all users and PIs to reach out to MCC staff and the Director of Operations with any feedback.

Users may also contact the MCC Advisory Committee members with questions or comments about the facility operations.

To continue to provide an excellent research experience for our users, we may solicit feedback and information about your experiences in the form of annual online surveys.

21. Information for External Users

All external users should review and sign our Drexel Core Facility and Lab Service Agreement.

For security and liability reasons, we cannot guarantee 24-hour access for external users. Please coordinate your reservation times with the instrument manager.

External usage should be paid in advance by check or credit card. Credit card payments can be made online. Checks must be made payable to Drexel University and mailed to the instrument manager’s attention at Drexel University Materials Science, LeBow 344, 3141 Chestnut St, Philadelphia, PA 19104.

External usage can also be secured by a purchase order. The MCC will invoice the purchase order on a biweekly or monthly cycle.

External users can request non-disclosure agreements with the facility staff.