

# CCEM Terms of Use v1.0.0

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## Acronyms Defined

|       |  |
|-------|--|
| ALARA | As low as reasonably achievable                  |
| Ar    | Argon  |
| CCEM  | Canadian Centre for Electron Microscopy          |
| EDI   | Equity, Diversity, and Inclusivity               |
| ETM   | Equipment Training Module                        |
| LIMS  | Laboratory Information Management System         |
| MILO  | McMaster University Industry Liaison Office      |
| MREB  | McMaster Research Ethics Board                   |
| NDA   | Non-Disclosure Agreement                         |
| POI   | Person of Interest                               |
| RG    | Risk Group                                       |
| RHPCS | Research and High-Performance Computing Services |
| SOP   | Standard Operating Procedures                    |

The following terms of use defines the relationship between CCEM and its users, and outlines the principles and standards that all personnel are required follow when conducting research, training, or other activities at CCEM.

## 1 Definitions

|                    |   |
|--------------------|---|
| User               | An individual or organization that engages with CCEM to further research, development, or education.  |
| In-person User     | An individual whose engagement with CCEM infrastructure requires that they be physically present on site at CCEM.   |
| Independent User   | A user who the CCEM has deemed to have sufficient training on an instrument or in a laboratory process so as to be granted access for independent use / operation of the instrument/process by the CCEM. Access may or may not be limited to daytime hours. |
| Trainee            | A user in the process of undergoing training by CCEM staff toward becoming an independent user.   |
| Supervisor         | The academic faculty member, group leader or other individual responsible for directing user research operations and administering funding to cover usage fees.   |
| Visitor            | Any individual, not directly involved in CCEM access as a user or customer, who enters the facility in-person, typically on invitation from a CCEM staff or user.   |
| University         | McMaster University, unless otherwise named.  |
| Academic           | A university or other educational institution.  |
| Industry           | An organization of private enterprise, or a government laboratory.  |
| Customer           | Any user responsible for payment of any fees incurred.  |
| Staff / CCEM Staff | Employees of CCEM / McMaster University.  |
| CCEM Facilities    | CCEM staff services or CCEM's physical infrastructure (equipment, laboratories, or instruments).  |
| Equipment          | Infrastructure housed within CCEM and operated by users or staff.   |
| Instrument         | Any major equipment operated at CCEM, typically referring to electron, ion, or x-ray microscopes.   |
| Laboratory         | The working spaces containing CCEM instruments or equipment.  |
| Supply(ies)        | Consumables or other minor items used at CCEM, which have associated costs.   |
| Usage              | Operation or occupation of CCEM equipment and/or supplies.  |

Session

A period of time, typically booked in advance, during which usage of CCEM equipment by staff and/or users takes place.

## 2 Accessing the CCEM

### 2.1 Access Policy

CCEM equipment and laboratories may be accessed as: (i) an independent user, (ii) a trainee, (iii) a customer seeking service work from CCEM staff.

The [CCEM User Access Policy](#) defines the terms, roles, and responsibilities of the CCEM's user access program. This includes descriptions of user eligibility, appropriate use, availability of equipment, and prioritization of access.

### 2.2 CCEM Access Times

CCEM defines the following for periods of access:

| Name            | Hours         | Days of the Week |
|-----------------|---------------|------------------|
| Weekday Daytime | 08:00 – 18:00 | Mon – Fri        |
| After Hours*    | 18:00 – 00:00 | Mon – Fri        |
| Overnight       | 00:00 – 08:00 | Mon - Sun        |
| Weekend         | 08:00 – 00:00 | Sat, Sun         |

(\*) For any instrument or equipment which does not explicitly have “Overnight” or “Weekend” periods defined for permissions, training, rates, or access, these periods are considered to also be “After Hours”. Holidays in which the CCEM is closed are to also be considered “After Hours”.

### 2.3 CCEM Fees

CCEM operates as a user facility on a cost recovery basis. As outlined in the [CCEM User Access Policy](#), CCEM requires users pay fees commensurate with their use of the facility and its resources. This includes, but is not limited to, equipment and staff time, and supplies consumed as part of usage. The specific fees associated with usage of the facility are determined via posted academic rates, accepted quotation, or as defined by a services or equipment use agreement. Fees are updated on an annual basis.

CCEM reserves the right to employ different rate types based on the classification of the customer organization (e.g., academic, industry, etc.), or other customer-imposed requirements beyond normal operating procedures (e.g., limited turnaround times, guarantees of results, etc.).

In special and limited cases, CCEM management may make exceptions to the rates that it charges or provide in-kind support for a project / user. This is at the discretion of CCEM management and must be arranged before facility usage.

A description of CCEM operations involving user fees is given in the following sub-sections.

#### 2.3.1 Academic Rates

CCEM offers academic rates at a discount compared to standard (i.e. industry) rates to promote research and training of HQP. A list of CCEM's academic rates for instruments, staff time, and common supplies is available on the CCEM website. In most cases, instrument rates are hourly. Certain instruments may have alternative rate structures instead (e.g. fixed price fees for a session of defined duration, or for a given usage or activity). Academic rates are only valid for charges



generated by users from an academic institution, and must be invoiced to a customer from an academic institution.

### 2.3.2 Calculation of Charges

CCEM charges are set in one of the following ways, listed in order of precedence:

1. Per project, based on an agreed-upon quotation.

In this case, quotations are calculated based on a fixed scope of work and estimated usage. More information is available in section 6.2.

2. Per activity or item, based on fixed prices.

This typically applies to supplies or equipment training modules (ETMs).

3. Actual usage, based on posted rates, defined as:

- The period in which a user's activities prevent the instrument or staff from being made available to other users or for other activities, in 30 minute increments.
- Inclusive of any minor (< 30 min) interruption or disruption due to equipment error or staff unavailability.
- Inclusive of any alignment or setup activity required by the user for collection of their data or performing of their experiment.
- Inclusive of any time following the experiment required to return the instrument to its original condition.
- Exclusive of major (> 30 min) interruption or disruption due to equipment error or staff unavailability, rounded to the nearest 30 min.

For all the above, fees are calculated based on usage of CCEM resources, and not upon the success of any experiment, observation, or activity.

Unless otherwise stated, supplies, consumables, or other items without a posted fee will be charged at cost. Academic rates for common supplies are available on the CCEM website, with other rates or costs for less common items available as requested.

Users of CCEM are responsible for all other incidental fees incurred for accessing the facility (e.g. parking, shipping, etc.).

### 2.3.3 Invoicing and Payment

CCEM will issue invoices to the customer, delivered via email, at the end of each month. For CCEM Jobs or other service agreements, invoices will be sent when the work is complete, or at the request of the customer.

For academic work, the invoiced customer will be the supervisor, co-supervisor, or a collaborating faculty member. CCEM will not issue invoices to, or accept payment from, graduate students.

Payment is expected within 30 days of invoicing.

Invoices remaining unpaid after 30 days or longer may result in a suspension of services, until such time as all outstanding invoices have been settled.

## 2.4 CCEM Systems

### 2.4.1 Laboratory Information Management System (LIMS)

CCEM uses a system custom to the University known as 'MacLIMS'. This is administered at the institutional level by McMaster Research and High-Performance Computing Services (RHPCS).

MacLIMS is used by CCEM and its users for managing instrument bookings, usage tracking, access permissions, and billing. Additionally, it is a repository of CCEM's business data pertaining to user information and CCEM service jobs.

Independent users of CCEM are required to have accounts for MacLIMS to book microscopes. These accounts are acquired when signing up for MacLIMS, and can be managed by a CCEM facility administrator.

### 2.4.2 CCEM Data Server

The server for medium-term storage and transfer of scientific data from CCEM instruments. The CCEM data server is managed by RHPCS, with backup and account security to provide safe service to CCEM users. CCEM users can access the CCEM data server using the Seafile software and/or web interface, and their CCEM data account.

Additional details on CCEM data storage and access are provided in the [\*Data Management and Cybersecurity Framework\*](#).

### 2.4.3 Microsoft Teams

The communication platform used for quick messages, posts, and information on CCEM instruments and operations for staff and in-person users. Access to CCEM-related Teams channels is available on request.

## 2.5 Non-Disclosure Agreements (NDAs)

If an organization requires an NDA prior to discussion with CCEM staff, provision of samples for service work, or for use of common CCEM facilities (e.g. CCEM data server) this can be arranged by notifying CCEM. The Terms of an NDA will be determined in discussion with the McMaster University Industry Liaison Office (MILO).

## **3 Code of Conduct**

### **3.1 Compliance**

#### 3.1.1 Compliance Requirement

Compliance with both the letter and spirit of this code is mandatory for all personnel, including CCEM staff, users, customers, and visitors, when using the CCEM resources, accessing CCEM services, or being present in-person in the facility.

It is the responsibility of all to familiarize themselves with the terms of this code. Ignorance of any terms described here does not prevent an individual from repercussions related to breach of code.

#### 3.1.2 Breach of Code

Failure to comply with terms outlined in this section may result in loss of access to CCEM facility and/or services.

In addition to any required reporting to security or legal agencies, CCEM may notify a user's supervisor, employer, or host organization.

Users have the responsibility to report any known or suspected violations of any applicable laws and/or any non-compliance with this code to CCEM staff in a timely manner.

### **3.2 Legal**

Personnel must adhere to all University policies, rules and regulations, and all laws, ordinances, rules and regulations set by the Government of Canada, Province of Ontario, and City of Hamilton.

### **3.3 Research Integrity**

CCEM is committed to upholding high research and ethical standards, and expect all CCEM staff, users, and customers to conduct themselves responsibly, ethically and with integrity.

### **3.4 Safety**

CCEM users must adhere to all University policies and procedures regarding health, safety, and environment. Any additional CCEM-specific standard operating procedures (SOPs) must also be followed.

Users must heed and comply with any directions from CCEM staff regarding health and safety.

In addition to any other legal reporting requirements, users must immediately report any occupational injuries, or unsafe conditions or practices witnessed to CCEM staff, and/or other McMaster Safety Agency.

#### 3.4.1 Safety Training

CCEM users are required to present proof of Workplace Hazardous Materials Information Systems (WHMIS) 2015 training before in-person usage of CCEM is permitted.

WHMIS 2015 training, as well as any other training required by CCEM and the University for performing work or activities at CCEM, is available from the University and its agencies. CCEM staff can help direct users to proper training courses and resources. External users may access

University training programs to seek safety training credentials by contacting CCEM staff and arranging for a Person of Interest (POI) account to be set up in their name.

It is the responsibility of the individual to understand the safety requirements for their research operations, and to communicate these with CCEM staff prior to starting work. It is the responsibility of all involved to confirm that safety training requirements are met prior to commencement of work.

#### 3.4.2 Biosafety

CCEM is not certified at any Containment Level for handling Risk Group (RG) materials. Users must understand the risk group rating of their materials and communicate this to CCEM staff before the materials can be brought into the facility. Questions on the appropriate risk group rating for a material can be directed to the McMaster Biosafety Office.

Some RG-1 materials may be analyzed at CCEM, if specific SOPs are provided to and approved by the McMaster Biosafety Office. Without prior approval, no biohazardous material of RG-1 or higher is to be analyzed at CCEM, or brought or sent to CCEM facilities.

#### 3.4.3 Radiation Safety

CCEM maintains a permit from McMaster Health Physics to retain and perform certain analysis operations on active materials. This defines the maximum activity limit for experiments on and storage of active material at CCEM. Any work on active samples must be planned in consultation with CCEM and McMaster Health Physics to confirm that the activity and analysis operations are within the limits of the permit.

It is expected that any experiments on active material at CCEM will follow the ALARA principle (as low as reasonably achievable) in considering the required activity and quantity of sample.

Active samples being sent to CCEM must be directed first to McMaster Health Physics, and accompanied by a completed and signed [Radioactive Material Acquisition Approval Form](#).

#### 3.4.4 McMaster Safety Agencies

Users of CCEM should familiarize themselves with the following agencies responsible for safety on campus, and at CCEM:

| McMaster Agency              | Description  | Contact                        |
|------------------------------|--|--------------------------------|
| Security Services            | General safety and security services for McMaster campus               | x24281<br>security@mcmaster.ca |
| University Health and Safety | General environmental, operational, and occupational health and safety | x24352<br>uhs@mcmaster.ca      |
| Biosafety Office             | Safety related to the use of biohazardous materials                    | mbso@mcmaster.ca               |
| Health Physics               | Safety related to radioactive sources                                  | x24226<br>hphys@mcmaster.ca    |

### 3.5 Respect for Others

#### 3.5.1 Equity, Diversity, and Inclusivity Policy

Every person must act in a manner characterized by respect for the dignity of every individual, and the diversity of others with whom they interact. This shall include, but is not limited to, respect for differences in gender, race, colour, age, disability, sexual orientation, gender expression, ethnic origin, religion, and any other characteristic protected by applicable laws.

Additional information is given in [CCEM's Equity, Diversity, and Inclusivity \(EDI\) Framework](#).

#### 3.5.2 Harassment and Violence

Every person must not engage in nor tolerate any harassment, violence, intimidation, retaliation, discrimination, or other disrespectful or inappropriate behavior. This includes behaviour between individuals and their subordinates.

#### 3.5.3 Reporting

Incidents or behaviours may be reported as per McMaster's [Discrimination & Harassment Policy](#). Complain intake offices of McMaster University are as listed below:

| McMaster Agency                      | Responsive to             | Contact                           |
|--------------------------------------|---------------------------|-----------------------------------|
| Equity and Inclusion Office (EIO)    | All community members     | x27581<br>equity@mcmaster.ca      |
| Student Case Management Office (SCM) | Students                  | X20220<br>scm@mcmaster.ca         |
| Employee and Labour Relations (ELR)  | Faculty and staff members | X22247<br>hr.mcmaster@mcmaster.ca |

Complaints may also be reported to CCEM management, who will maintain confidentiality as required, and if needed, see to addressing the matter as per McMaster's [Discrimination & Harassment Policy](#).

### 3.6 Physical Damage

#### 3.6.1 CCEM Equipment

CCEM equipment is not to be modified in any way without explicit permission and guidance from CCEM staff.

If equipment is damaged in any manner, the session is to end immediately and CCEM staff are to be notified.

If damage to equipment is accidental, and occurs during normal usage, users, their supervisors, or affiliated institutions, are not considered liable. If damage is in any way purposeful, due to improper or negligent treatment of equipment, or caused by users attempting to perform activities or service operations for which they have not been trained, then the user, their supervisor, or their affiliated institutions will be considered liable. In this case, they may be held responsible for some or all

repair costs required to restore the equipment to its original condition, and/or have equipment access revoked.

### 3.6.2 Sample Handling

Samples, particularly the samples of other users, are to be treated with respect, and with all reasonable consideration for preserving the status of the sample (e.g. without damage, loss, or other contamination).

Samples and materials left in equipment, holders, laboratories, and storage facilities, require a written note with user contact information and material description. Additional information such as date, description of when the sample will be removed, and instructions on how to handle the sample if moving it is necessary in the meantime, are recommended.

## 3.7 Data Handling and Cybersecurity

Personnel are expected to always maintain best practices for the handling of scientific, administrative, and all other types of data. All data is to be considered confidential by default.

Personnel are also expected to exercise high levels of caution around cybersecurity, including the treatment of both data and CCEM equipment.

Additional information, as well as complete rules and guidelines around expected conduct and best practices for data management and cybersecurity given in [CCEM's Data Management and Cybersecurity Framework](#).

## 3.8 Facility Acknowledgement

It is required that CCEM users acknowledge use of the facility and its resources when preparing journal publications, conferences proceedings, posters, or presentations. For journal publications, recommended acknowledgement text is as follows:

"[Technique(s) used] was performed at the Canadian Centre for Electron Microscopy (CCEM), a core research facility of McMaster University (also supported by NSERC and other government agencies)."

## 4 Training

### 4.1 Availability

#### 4.1.1 Prerequisites

Independent use of CCEM facility requires that users agree to and abide by all terms in the CCEM User Agreement or in a comparable McMaster University Equipment Use Agreement naming CCEM and its equipment.

All relevant and required safety training, as described in Section 3.4, is to be completed prior to the commencement of CCEM facility use.

For certain ETMs, it may be required that a short quiz or other ETM be completed prior to the start of training.

#### 4.1.2 User Eligibility

Users must be defined as eligible according to the CCEM User Access Policy, and act in compliance with the Code of Conduct outlined in Section 3.

In person use of CCEM equipment requires that users, or their organizations, possess and maintain general liability insurance as necessary to perform their activities at CCEM. Proof of insurance must be provided if requested.

#### 4.1.3 Expectations

CCEM staff are expected to provide clear and comprehensive training which enables new users to operate equipment independent of CCEM staff supervision. If training materials and documentation are required as part of training, it will be provided by CCEM staff. It is also expected that CCEM staff make clear to the trainee what issues, if any, remain regarding their competency, and what demonstration of competency the trainee can provide to obtain independent access permission.

CCEM expects trainees to make all reasonable efforts to heed instructions from CCEM staff and study provided material and documentation, to help their education in equipment operation.

#### 4.1.4 Frequency Offered

Training is to be offered by CCEM staff as requested, pending their availability, and the availability of the required equipment.

### 4.2 Training Programs

#### 4.2.1 Equipment Training Modules (ETMs)

ETMs are a set of discrete training and education programs aimed to provide new and prospective users with a clear and structured training pathway toward independent microscope operation. With ETMs, the content, samples, equipment, and cost needed to provide microscopy education and training in instrument operation are pre-defined. Examinations are also included to provide an objective measure of user competency, and feedback on how improvements can be made.

For microscopes which have ETMs associated with their operation, the completion of these programs is required for gaining independent access permission. CCEM may offer alternative training methods at their discretion under exceptional circumstances.

For advanced equipment, it is often required that an ETM not be undertaken until a series of prerequisite trainings have been completed.

Complete and up to date information on the CCEM ETM program is available on the CCEM website.

#### 4.2.2 Other Training

For equipment and activities not associated with ETMs, CCEM staff will consult with trainees on their samples and requirements, and work closely with the trainees to provide them with sufficient instruction as to gain proficiency in instrument operation. Unlike the ETMs, proficiency goals are less explicit, and will have to be discussed between the trainee and the CCEM staff. Similarly, the timeline and number of sessions required will vary, depending on the required activities and competency of the trainee.

#### 4.2.3 Outcomes

CCEM will determine when a trainee has achieved sufficient proficiency with equipment operation as to receive permission for independent access.

Obtaining independent access to use equipment typically begins only with permission for usage during weekday daytimes (i.e. Mon-Fri, 08:00-18:00). Additional experience using the equipment (i.e. hours of usage logged) as well as additional instruction in troubleshooting are required before after hours permissions can be obtained.

CCEM makes every reasonable effort to ensure that at the completion of their training, trainees can safely and competently operate equipment, and perform their analytical activities. However, CCEM cannot make any guarantees toward the quality of scientific data users are able to generate following their training. CCEM also holds no expectations on the pace of work newly trained users can achieve. If requested, additional training or consultation with CCEM staff on optimizing analyses is available.

#### 4.2.4 Training Fees

Fees for training will be set based on the price list of ETM modules, a separate pre-negotiated agreement or quote, or based on the hourly fees for equipment and CCEM staff time.

CCEM will aim to be upfront with estimates on total costs for training to the best of its ability.



## 5 Independent Facility Use

### 5.1 Availability

#### 5.1.1 Prerequisites

Independent use of CCEM facility requires that users agree to and abide by all terms in the CCEM User Agreement or in a comparable McMaster University Equipment Use Agreement naming CCEM and its equipment.

All relevant and required safety training, as described in Section 3.4, is to be completed prior to the commencement of CCEM facility use.

Users are only to access or use equipment, or perform laboratory activities, in which they have received prior training by CCEM staff, and permission for independent use from CCEM staff.

#### 5.1.2 User Eligibility

Users must be defined as eligible according to the CCEM User Access Policy, and act in compliance with the Code of Conduct outlined in Section 3.

In-person use of CCEM equipment requires that users, or their organizations, possess and maintain general liability insurance as necessary to perform their activities at CCEM. Proof of insurance must be provided if requested.

Users shall not sub-license CCEM equipment to any other individual, organization or entity apart from the one they have declared to represent at CCEM.

Users shall not allow equipment use by other personnel, even if the other personnel are permitted to use the said equipment, without prior permission from CCEM staff.

#### 5.1.3 Hours of Access

Users are only to access CCEM in-person when University campus is open for activities, and they possess equipment training and permissions for the relevant time (see Section 2.2).

Users are only to access equipment for which they have received specific training and permission during the relevant time, regardless of their access and permissions with other equipment.

### 5.2 Managing Usage

#### 5.2.1 Equipment Booking

Equipment is to be booked in advance of usage, using the CCEM LIMS.

Users can book equipment up to 14 days in advance, on a 'first come first served' basis.

In exceptional circumstances, CCEM staff may assist users by booking equipment for them greater than 14 days in advance. Circumstances in which CCEM staff may make accommodations include:

- Travel of the user or a visitor from outside of Hamilton
- Analysis of 'time-sensitive' samples (here defined as samples whose characteristics will change over a time period relative to the instrument bookings, and that cannot be otherwise preserved).

- A very large or time-consuming experimental program, such that there are concerns with instrument capacity.

The following rules apply by default, but exceptions can be made for different equipment, users, or experiments if requested.

- Equipment can be booked for a maximum of 16 h per equipment per week by an individual user, but exceptions can be made for different equipment, users, or experiments if requested.
- Only one instrument, laboratory, or equipment can be booked concurrently.

Use of the equipment shall terminate no later than:

- (a) a time such that the equipment will be free and ready for use for the next booking.
- (b) the time at which a user's access permission ends (e.g. daytime access ends at 18:00 on weekdays)

### 5.2.2 Overbooking Policy

It is expected that users book no more time on equipment than they estimate to be necessary to complete their analyses. To discourage 'overbooking', i.e. where a user books much more time than is necessary to complete their work, CCEM reserves the right to charge a fee for up to 50 % of the booked time for any case where actual usage is < 50 % of the booked time. This policy is in effect on the following equipment only, where demand on instrument time is historically highest:

Spectra Ultra (TEM), Talos F200X (TEM), Helios 5 (FIB), Helios 5 PFIB (FIB), Crossbeam 350 (FIB), Apreo 2S (SEM)

### 5.2.3 Cancellation / Late / No-show Policy

It is expected that users will start their session on time according to their booking. It is also expected that as soon as a user knows they are unable to operate the equipment during their booked session, they will make a reasonable attempt to cancel or reschedule their booking to vacate that time to other users.

If a session has not started by the time it is 25 % into the booking, CCEM staff reserve the right to cancel the entire booking. In this case, a penalty of up to 50 % of the booking usage (or a minimum of 30 mins) may apply.

Cancelling or modifying a booking can be done in different ways depending on the time relative to the booking. Additionally, a cancellation / no-show penalty may apply. These are detailed in the table below:

| Time Relative to the Booking            | To Cancel or Modify a Booking | Penalty   |
|---|-------------------------------|---|
| >24 h                                   | CCEM LIMS                     | None  |
| < 24 h                                  | Contact CCEM staff            | None  |
| < 25 % into the duration of the booking | Contact CCEM staff            | Fee for up to 25 % of the booking usage (or a minimum of 30 mins) |
| > 25 % into the duration of the booking | Contact CCEM staff            | Fee for up to 50 % of the booking usage (or a minimum of 30 mins) |

If a user wishes to transfer their booking to another user (e.g. another member of their research group) they are to modify their booking, as directed in the table above. No penalties for modifying the booking will apply, but the rules surrounding 5.2.2 Overbooking Policy will still be in effect.

CCEM will make a reasonable effort to ensure equipment is available to users for the times that they book, but maintains the right to cancel, reschedule, or modify user bookings at any time.

#### 5.2.4 Condition of Equipment

Users are to inspect equipment at the start of their session, to the best of their ability. If features, capabilities, or functions of the equipment are found to be lacking such that their planned activities cannot proceed, the session can be ended without penalty. In these cases, CCEM staff must be notified immediately.

If equipment is found to still be occupied by another, or otherwise left in a state by the previous user that hinders, limits, or prevents usage, CCEM staff are to be notified immediately.

It is expected that minor alignment and setup operations may be required by a user at the start of any session.

At the end of each session, users are to ensure equipment is left in a useable state, comparable to the condition it was in when their session began.

#### 5.2.5 Logging of Usage

Users are required to register the actual usage times, defined as per Section 2.3.2, following their session. The manner of time logging will vary based on the equipment, but could be done by interlock/access device, log sheet, or by informing the CCEM staff member responsible for the equipment.

### 5.2.6 Supplies

Supplies can be requested from CCEM staff. Where supplies are freely available, users are required to log their usage/consumption via access device, log sheet, or by notifying CCEM staff.

### 5.2.7 Technical Issues / Support

Technical issues or other atypical equipment behaviour encountered during a session are to be reported to the responsible CCEM staff member.

If users need assistance with a technical issue, or otherwise require staff support with their analysis, they can reach out to CCEM staff. CCEM staff will make a reasonable attempt to assist the user in a timely manner; however, if a knowledgeable staff member is not available or otherwise occupied, the user may need to wait for assistance or end their session.

### 5.2.8 Outcomes

CCEM, being neither the manufacturer, nor a supplier, nor a dealer in its equipment, makes no warranties, express or implied, as to the condition of the equipment. Every reasonable attempt is to be made by the facility to ensure the equipment is in good condition and calibration as to perform its intended functions and meet manufacturer performance specifications. However, for all usage of CCEM facilities and equipment, users and customers are to consider the equipment “as is”.

CCEM will not be held accountable for any improper or erroneous data obtained using its equipment.

## 5.3 After Hours Usage

Usage of CCEM equipment and access to the CCEM after hours, overnight, or on weekends requires specific training and permissions to be obtained from CCEM staff. Staff support will not be made available during these times.

While others may be present at the facility, users accessing CCEM after hours are considered “working alone” and are expected to take necessary safety precautions during their time at CCEM, as well as travelling to/from the facility.

CCEM will not permit after hours usage of any laboratory operation requiring the use of dangerous chemicals, electrical hazards, or other dangerous substances.

## 5.4 Remote Operation

Remote operation of CCEM equipment, or remote access to CCEM computers, is to be booked and managed in the same manner as in-person use.

For remote connections, it is required that users obtain VPN access to the University network. External users may acquire this by contacting CCEM staff and arranging for a Person of Interest (POI) account to be set up in their name.

## 5.5 User Materials

### 5.5.1 Storage and Handling of Samples

Users are expected to handle and store their samples in a manner which maintains cleanliness and safety of the facility.

Users are expected to have full knowledge of their sample materials, and any hazards they might present to personnel or equipment. Users must alert CCEM staff of these hazards prior to bringing sample materials to the facility. Biohazardous or radioactive samples must follow procedures outlined in section 3.4.

It is expected that most users will travel to and from the facility with their samples. If required, users may request CCEM to provide limited, short-term sample storage space to facilitate their usage of the facility. Such locations include the sample preparation lab, desiccator shelf, and Ar glove box.

Usage of CCEM storage space is permitted only to those given access and training by CCEM staff. Users are expected to have all materials stored at CCEM clearly labelled and dated.

To free space, CCEM may need to periodically dispose of samples. In this case, reasonable attempts will be made to contact the user or supervisor before proceeding with disposal.

CCEM bears no responsibility for the status or condition of user samples stored at CCEM, including those in the desiccators or Ar glove box.

#### 5.5.2 Storage and Transfer of Data

Users may not connect physical storage media to CCEM computers or equipment at any time. Transfer of data from CCEM equipment is to be done solely using web-based systems (e.g. CCEM data server). Data are to be transferred at the end of a session. CCEM bears no responsibility for lost or stolen data left by users on its equipment.

Users utilizing the CCEM data server for storage of their scientific data can have it retained for up to 5 years, or until their accounts are inactive.

Full details on CCEM data storage and access are provided in the [Data Management and Cybersecurity Framework](#).

## **6 CCEM Services**

### **6.1 Services Offered**

#### 6.1.1 Consultations

CCEM offers free email, in-person, or virtual consultation to users or prospective users on their planned experiments. Recommendations on analysis pathways, workflows, and optimal equipment can be provided as requested.

#### 6.1.2 Sample Preparation

CCEM offers services to prepare samples for microscopy and other analyses, to the best of its ability, based on its standard fee structure for equipment and staff time.

#### 6.1.3 Sample Analysis / Data Acquisition

CCEM offers to have staff perform sample analysis using CCEM equipment, based on its standard fee structure for equipment and staff time.

#### 6.1.4 Data Analysis / Reporting Results

CCEM staff may engage in data analysis or reporting, as requested, using various post-processing and analysis software. This service is offered based on standard CCEM fees for staff time.

#### 6.1.5 Contribution to Scientific Publications

CCEM staff may contribute as a co-author or other collaborator in the preparation of scientific journals, conference proceedings, conference/seminar presentations, posters, or other outputs. Co-authorship is not considered in determining fees for staff and instrument use. However, contributions beyond standard data analysis and results reporting can be offered in-kind by CCEM, provided the effort is reasonably limited in scope, and agreed upon in advance by all parties.

### **6.2 CCEM Jobs**

CCEM jobs are defined as any service operation in which CCEM performs sample preparation, sample analysis, data acquisition, or data analysis activities on user-supplied samples, on behalf of a customer.

#### 6.2.1 Scope of Work

CCEM jobs are to have a pre-defined scope of work, supplied by the customer, which describes the number of samples and their character, and the requested scientific, analysis, or processing objectives. If the customer has timelines or deadlines for the results of a CCEM job, or specific reporting requirements, these are also to be made known as part of the scope of work.

#### 6.2.2 Quotation

CCEM will provide upon request a quotation for its services, based on a scope of work. CCEM quotations are generated by CCEM staff and calculated using estimates of usage and supplies at appropriate rates.

By default, CCEM quotations are valid for 60 days unless otherwise stated. Acceptance of a quotation is done via written message, or provision of a purchase order.

Upon completion of the job, CCEM will invoice according to the accepted quote. If there are changes in the scope of work during a job, these will be reflected by a timely revision to the quotation and accepted before work is to proceed.

#### 6.2.3 Provision of Sample Materials

Users or customers are to provide CCEM with their sample materials. Such materials should be clearly labelled, and accompanied by all relevant information CCEM staff will need to begin the job.

Users are expected to have full knowledge of their sample materials, and any hazards they might present to personnel or equipment. Users must alert CCEM staff of these hazards prior to shipping sample materials to the facility. Biohazardous or radioactive samples must follow procedures outlined in section 3.4. Relevant safety information (e.g. Material Safety Data Sheets) should be provided with the samples, as well as any special storage or handling conditions (e.g. temperature or atmosphere sensitivity).

#### 6.2.4 Scheduling

Sessions are booked for a CCEM job once a scope of work has been agreed upon (or quotation accepted), and one of the following conditions are met:

- The sample materials arrive at CCEM
- The customer provides tracking information showing an anticipated date of arrival for the sample materials at CCEM
- The customer provides written confirmation that samples will be provided in-person at a given date

Users can be notified of scheduled times for CCEM jobs on request. CCEM makes every reasonable effort to minimize turnaround time, and process jobs as they are booked. If there are delays in scheduling sessions for a job, or if sessions need to be rescheduled, CCEM will notify the customer.

If a booked session is delayed or cancelled by the user, penalties as described in section 5.2.3 may apply.

#### 6.2.5 User Participation

For any CCEM job, users or customers are welcome to attend the sessions in-person alongside CCEM staff, or remotely via MS Teams. If this is a requirement of the user or customer, they are to notify the relevant CCEM staff at the beginning of a job, so that sessions may be scheduled based on common availability.

#### 6.2.6 Reporting of Results and Transfer of Data

Results of a CCEM job will be communicated to the user or customer by CCEM staff. This may be via email, technical report (if requested), or a combination of both. Follow-up discussions with users or customers on the results of CCEM jobs are available on request, and without fee.

All scientific and processed data are to be made available to the user or customer by sharing a link to a secure library on the CCEM data server.

### 6.2.7 Outcomes

CCEM will make every reasonable effort to achieve the targeted outcome of a CCEM job, within the discussed scope of work. As discussed in section 2.3.2, CCEM fees are based on effort, not on outcomes. Therefore, CCEM reserves the right to consider a job as having been completed once this effort has been put forth, regardless of whether the customer's desired outcome has been achieved.

CCEM makes every effort to deliver a high quality of scientific data and maintain confidence in the veracity of all measurements made using CCEM equipment. However, CCEM is not to be held accountable for any errors in its data, or erroneous interpretation of its data, results, or other reporting.

### 6.2.8 Intellectual Property

Scientific raw data and processed data are owned by the customer. Meta data, method data and algorithm data are owned by CCEM. Administrative data are owned by CCEM.

Full definitions of data types, and other policies related to intellectual property, are found in the [Data Management and Cybersecurity Framework](#).

### 6.2.9 Handling and Storage of Samples

CCEM will handle and store customer-supplied sample materials with all reasonable care; however, CCEM is not liable for accidental errors in handling or storage causing loss, degradation, or damage to a sample.

Samples will be stored in a manner as to best preserve the condition of the sample for the period until the job is complete. Following completion of the job, CCEM can maintain long-term storage of the samples, or return them to the user or customer at their expense.

Long-term storage of the samples will be maintained for a period of 5 years, before samples are disposed. During this time period, samples held in specialized storage (e.g. refrigerator, glove box, etc.) will be removed as soon as space/capacity limitations require, and it is accepted that some degradation of the sample may occur.

### 6.2.10 Handling and Storage of Data

Data relevant to CCEM jobs are stored by CCEM staff using secure libraries on the CCEM data server, and kept for a storage term of 5 years. This term excludes data relevant to preservation of meta data or method data. A full description of data storage is found in the [Data Management and Cybersecurity Framework](#).