

AGENDA ITEM TITLE: COIFPM Multiuser Instruments Use DAPP and Data Acquisition Request Procedure. – Chitnis, Piri

SESSION TYPE:

- Work Session
- Information Session
- Other
- [Committee of the Whole – Items for Approval]

APPLIES TO STRATEGIC GOALS:

- Yes (select below):
 - Institutional Excellence
 - Student Success
 - Service to the State
 - Financial Growth and Stability
- No [Regular Business]

Attachments are provided with the narrative.

EXECUTIVE

SUMMARY:

Vice President Chitnis and Dr. Piri will provide the Board with a comprehensive update regarding the progress made in drafting the facility and equipment utilization policy and procedural documents for the Center of Innovation for Flow through Porous Media (COIFPM) located within the High Bay Research Facility. The proposed policy and procedure as mandated by the Wyoming Legislature are to be reviewed and approved by the Board of Trustees.

PRIOR RELATED BOARD DISCUSSIONS/ACTIONS:

A draft of the Use agreement was presented during the March 2024 Board meeting; a refined agreement is presented that meets the requirements outlined by a footnote in the Wyoming Legislature’s FY25-26 budget bill. In the course of drafting these documents, input from the SER Director and College of Engineering Dean was to be solicited.

WHY THIS ITEM IS BEFORE THE BOARD:

For Board approval per a footnote in the Wyoming Legislature’s FY 25-26 budget bill that reads “The board of trustees of the University of Wyoming establishing a research and facility use policy for the high bay research facility to allow and encourage equipment and facility use by university faculty and graduate students. The resulting equipment and facility use shall be summarized within any budget request submitted under W.S. 9-2-1013 during the period beginning July 1, 2024 and ending June 30, 2026.”

ACTION REQUIRED AT THIS BOARD MEETING:

Request Board approval of the COIFPM Multiuser Instruments Use DAPP and Data Acquisition Request Procedure.

PROPOSED MOTION:

“I move the Board approve and adopt the COIFPM Multiuser Instruments Use DAPP and Data Acquisition Request Procedure that will allow and encourage equipment and facility use by university faculty and graduate students.”

PRESIDENT’S RECOMMENDATION:

The President recommends approval.

Department Administrative Policy and Procedure

Subject: Center of Innovation for Flow through Porous Media (COIFPM) Instrument Use Policy

Approved Date:

I. PURPOSE

To establish a research and facility use policy for the Center of Innovation for Flow through Porous Media (COIFPM) that describes how the services of major multiuser imaging instruments (specifically electron microscopes and x-ray micro-CT and medical-CT scanners) in COIFPM will be made available to all students and employees of the University of Wyoming using the center's data acquisition project procedures.

II. DEFINITIONS

Multiuser Instruments: Major multiuser imaging instruments made available to students and employees throughout the University of Wyoming for shared use. Instruments designated as multiuser will depend on the durability, safety, and ease of use to accommodate the needs of various users while ensuring efficient operation and optimal performance. It does not include equipment that is fabricated or modified using the COIFPM IP and know-how or customized equipment built for specific research initiatives.

III. POLICY

Instrument Access

The multiuser instruments at COIFPM (which form the bulk of the total value of Center's instruments) are available for use by all faculty and researchers at the University of Wyoming for research and educational purposes. Examples of potential use include:

- Preliminary data acquisition for research grant proposals.
- Data acquisition for specific research aligned with ongoing grants and/or contracts.
- Planning data acquisition for research grant proposals to be submitted to funding agencies.

Access to multiuser instruments will be generally granted unless the following limitations apply:

- Full utilization of the equipment.
- Prohibitive costs or time required to set up the equipment for a new user's customized needs.
- Unavailability of expertise or skilled professionals needed to operate the equipment.

- Restrictions imposed by research grants, intellectual property agreements, contracts, subcontracts, or customized equipment fabricated for specific COIFPM research initiatives.
- Prohibitive experimental conditions, sample conditions, or time required by skilled professionals to set up, conduct, and safely complete the tests and process the data.

Instrument Awareness

To facilitate access, applicable multiuser instruments will be added to the **COIFPM Shared Instrument Database** located on COIFPM's website.

Cost Recovery

The costs associated with the use of the equipment shall be recognized and recovered by the Center. Information on how operating costs are determined shall be made available to the Research & Economic Development Division. Use of equipment shall be billed according to established hourly rates listed on the **COIFPM Rate Schedule**.

All users will be required to sign a liability form.

Requesting Use of Multiuser Instruments

The process for requesting access to multiuser instruments at COIFPM will adhere to the guidelines outlined in the Data Acquisition Request Procedure. This procedure shall be reviewed annually by the VP of Research & Economic Development and the COIFPM Director. Revisions shall be made based on changes in the demand and per user feedback as well.

Individuals or groups utilizing the facility and equipment must adhere to all University Regulations and applicable city, county, state or federal ordinances and statutes.

IV. ROLES & RESPONSIBILITIES

Instrument Access Team: The *Instrument Access Team* will be responsible for performing a technical review of each request. It shall consist of the following members:

Requestor: Any University researcher or entity, including affiliated organizations, who may request use of or be party to any agreement or arrangement for use of COIFPM equipment. The individual or group will need to complete the request form (and project proposal, if applicable), and provide additional information as needed.

Lab Manager – Individual responsible for managing the operation of shared instrument, tracking availability, maintenance schedules, and ensuring proper utilization. Person(s) assigned will be dependent upon the equipment requested for use. Lab manager will coordinate the project with the Center's Safety Office and appropriate Instrument Operator.

Technical Lead - Individual responsible for providing technical expertise, while supporting the data processing functions of the project (e.g. storage and transfer,

segmentation, etc.). Person(s) assigned will be dependent upon the equipment requested for use and the scope of the project.

COIFPM Business Office Representative – Individual responsible for assessing the financial implications of equipment requests, reviewing estimated expenditures, and ensuring that equipment usage aligns with budgetary constraints. This individual will also handle the administrative aspects of processing requests, maintaining records, and communicating with requestors regarding approval status, scheduling, access invoices, and any related documentation.

V. RELATED FORMS & RESOURCE MATERIALS

| COIFPM Multiuser Instrument Share Forms & Resource Materials | |
|--|--|
| Forms/Resource Materials are located on the COIFPM website under Instrument Scheduling | |
| Form/Resource | Description |
| COIFPM Data Acquisition Project Request Form | The <i>COIFPM Data Acquisition Project Request Form</i> serves as a formal document to initiate the process of acquiring data for a specific project. It provides a structured framework for requesting and documenting data acquisition needs, ensuring clarity, accountability, and alignment with project objectives. |
| COIFPM Data Acquisition Project Proposal | The <i>COIFPM Data Acquisition Project Proposal</i> outlines the plan and objectives for acquiring data to support a specific project. It serves as a formal document to communicate the need for data, the proposed approach for acquisition, and the expected timeline and outcomes. |
| COIFPM Shared Instrument Database | The <i>COIFPM Shared Instrument Database</i> is a centralized repository of information about the instruments available for shared use at COIFPM. |
| COIFPM Rate Schedule | The <i>COIFPM Rate Schedule</i> is a structured document outlining the charges or fees associated with the use of specific instruments provided by COIFPM. |

Responsible Division/Unit: Center of Innovation for Flow through Porous Media (COIFPM)

Source: None

Links: <http://www.uwyo.edu/regs-policies>

Associated Regulations, Policies, and Forms: [2024 House Bill 0001 \(HB0001\), Section 316](#); [UW Regulation 6-4](#)

Approved:

Data Acquisition Request Procedure
Center of Innovation for Flow through Porous Media
University of Wyoming
April 27, 2024

The multiuser instruments at the Center of Innovation for Flow through Porous Media (COIFPM) are available for use by all faculty and researchers at the University of Wyoming for research and educational purpose. These instruments can be used for one-time data collection for (1) exploratory research experiments to obtain preliminary data or (2) long-time use in grants and contracts. If the access to these instruments is needed for applying for a grant or obtaining an industry contract, additional project information is needed to ensure availability of sufficient instrument and staff time. Prices for the use of equipment will be charged for exploratory samples. Support for using the equipment may be available from the Research and Economic Development Division (REDD), College of Engineering and Physical Sciences (CEPS) and/or the School of Energy Resources (SER). The cost of equipment use in a long-term project must be included when a grant application is submitted, or an industry contract is negotiated. Prices are based on equipment depreciation, maintenance costs, supplies and materials, and technician compensation. Available multiuser instruments are:

- ETEM
- FIB-SEM
- QEMSCAN
- X-ray Medical-CT scanner
- X-ray Micro-CT scanner

New equipment owned by UW at the COIFPM will be added to the list of equipment available for use. The instrument list, access process, and use rates will be reviewed at least annually and revised based on changes in operational costs, demand, user feedback, etc.; potential users are encouraged to provide feedback to vpred@uwyo.edu and coifpm-business@uwyo.edu. However, rates will not be changed during the course of a project once agreed upon. Some multiuser instruments may have use limitations due to integration with other equipment such as high-pressure high-temperature flow apparatuses.

- **Step 1- Submit Request:** Individuals or entities needing access to the multiuser instruments, will submit their applications to: coifpm-business@uwyo.edu and vpred@uwyo.edu using the attached [COIFPM Data Acquisition Project Request](#) Form.
- **Step 2- Technical Review and Approval:** Within 2-3 business days, COIFPM's Equipment Access Team will conduct a technical review of the request for the appropriateness of the samples for use in the available multiuser instruments and contact the requestor with any follow-up questions. This team will then meet to develop their plan with a level of detail appropriate to the scope and document that plan for long-term uses in a brief COIFPM Data Acquisition Project Proposal. For short-term exploratory research experiments to obtain preliminary data a Project Proposal is not required. Within 1-2 business days of this step, the request and project proposal (if applicable) will be jointly reviewed by the COIFPM Director (or designee) and Vice President for Research and Economic Development (VPRED) (or designee) and approved (or returned for revision). If needed, VPRED will facilitate review by subject matter experts regarding the technical aspects of the project.

- **Step 3- Data Acquisition Scheduling, Execution, and Data Processing:** Once the request has been approved, the work will be scheduled, based on user, staff, and equipment availability. The work will be scheduled as quickly as possible. Following data acquisition, the Equipment Access Team will work together to complete any data processing, handling/storage of the samples, etc. When the scope of the request is delivered, the Equipment Access Team will formally close the project with notice to coifpm-business@uwyo.edu.

***Lab Floor Access Control:** Requestors and their Team Members are encouraged to be present for the execution of the work, but instrument operation will only be executed by authorized COIFPM workers. Requestors and their Teams are welcome on the lab floor during execution of the work, but until safety training is completed they will need to be escorted by a person with COIFPM lab access who can ensure their safety in compliance with COIFPM lab procedures. COIFPM is an access-controlled facility, primarily to ensure Employee safety, as medium and high hazard experiments are conducted in the facility. Un-escorted COIFPM lab access is granted only after COIFPM General Lab Safety Training is completed.

****Equipment and Staff Costing:** Charges billed to the Requestor's organization will be in accordance with the most updated COIFPM Rate Schedule, which includes by-instrument-system and by-role costing for data acquisition project work. One of the COIFPM members of the Project Team will be assigned to provide monthly reporting of costs, to be reviewed jointly with the requestor before submission to the COIFPM Business Office. The COIFPM Business Office will submit billing to the requesting department monthly.

*****Equipment Access Priority for timing of equipment access:** For a small number of exploratory samples, rapid access to data collection is feasible, subject to staff and equipment availability. For long term use of equipment, the following prioritization will be followed.

1. COIFPM-affiliated, UW researchers conducting work associated with COIFPM research grants, contracts, and subcontracts, and other COIFPM obligations that commit the use of the Center's capabilities and capacities.
2. UW faculty, research staff and students
3. All external individuals or entities

******Additional Information for Requesters:**

- a) In the future, as the instrument use requests increase, a scheduling software will be examined for implementation.
- b) There is one company that is located in COIFPM (Piri Technologies). **Piri Technologies has its own equipment that is separate from and in addition to those of COIFPM.** But when they need to access the multiuser instruments, their requests too will be handled according to the procedure. Piri Tech requests outside work associated with COIFPM research grants, contracts, and subcontracts, and other COIFPM/UW obligations that commit the use of the Center's capabilities and capacities will have 3rd priority (i.e., lower priority than other UW researchers as mentioned by the commenter). And they too pay for the use of the instruments.
- c) Selection of the submitted requests is simple and is based on feasibility of the study. It is affected only by factors such as instrument capabilities, sample conditions/appropriateness, experimental conditions being requested, and availability of appropriate materials/supplies. However, scheduling is subject to staff and equipment availability. For instance, if a given

requested study is feasible but instrument and/or staff are not available, then COIFPM will still work with the requester to schedule the work for the first available opportunity.

- d) Most of the multiuser instruments are seldom fully utilized and often there are openings in the schedule making it possible to plan for new studies. In other words, if a given multiuser instrument is utilized, it will be so only for the period that has been booked for and therefore other studies can be scheduled for subsequent periods. This will be done in a fully transparent manner so that the requester will receive clear timeline for the requested study.
- e) We will also provide an expected timeline for data access for each request. Shortly after the request is received and reviewed, COIFPM will be able to provide the requester with timelines to: (1) perform the study and (2) access the data. Expectedly this could vary for different studies and therefore there are no fixed timelines that can be listed here for all requests as they may be technically different from each other.
- f) The requestors and their team members **are encouraged** to be present for the execution of the work as clearly mentioned earlier in the document under the section titled 'Lab Floor Access Control'. However, it is important to note that in any given day, COIFPM affiliated researchers perform a large number of activities (related to COIFPM research projects) that frequently involve use of hazardous and flammable fluids at elevated pressure and temperature conditions and often utilize x-ray imaging platforms. Therefore, expectedly COIFPM is an access-controlled facility to ensure everyone's safety. But despite this, we will grant **un-escorted COIFPM lab access** after COIFPM General Lab Safety Training is completed. Training of the instruments can be provided as well except when: (1) the costs or time required is prohibitive, or (2) the expertise or skilled professional is unavailable.
- g) The skilled professionals at COIFPM responsible to operate the multiuser instruments have research project duties as well and therefore scheduling of requests shall be done such that they can properly attend to their research tasks too.