

Institute of Materials Processing (IMP) Charter

Date Approved: 6 October 2023

1. History and Preamble

This charter governs the operations of the Institute of Materials Processing (IMP), a Vice President for Research (VPR)- authorized research center (*posthac* the center) at Michigan Technological University. IMP exists to support a research-enabling materials processing infrastructure available to all university researchers, promote and facilitate the development of external research proposals that use the facilities, and assist other units in maintaining material processing capabilities and functionality when and where needed.

The current IMP was originally founded in 1955 as the Institute of Mineral Research to provide developmental and technical support to the mining industries in the State of Michigan as a state-funded, dedicated research institute with a non-academic staff of research scientists and engineers. In 1988, the Institute was renamed as the Institute of Materials Processing (IMP) in recognition of an expanded role that included other materials industries, notably steel making, ceramic, and composite processing; and near net-shape manufacturing. In 2002, IMP's non-academic mission was terminated as state support was discontinued but continued as a faculty-led VPR-led research center. IMP merged with the Institute of Engineered Materials (IEM) in 2010, further broadening its scope to include process-engineered functional materials.

The IMP mission is to provide support for, and promote, a unique suite of materials processing facilities such that they will be functional and available to provide a competitive advantage for faculty-led research, and to support activities that foster interest in materials and materials processing. Towards enhancing Michigan Tech's portfolio of materials processing capabilities, IMP is also motivated to assist and support other faculty and units in the establishment of new capabilities and material processing functionalities.

2.0 Description of Proposed Activities

IMP is populated by faculty who utilize campus open (publicly accessible) materials processing facilities to support their research, or who have an interest in supporting the availability of an infrastructure of enabling materials processing facilities that can serve future funding opportunities.

IMP invests in facilities that extend and enhance campus capabilities to process materials in support of academic research. Activities might include (but not limited to) providing support for the purchase of new materials processing capabilities, to assist with costs associated with routine and non-routine maintenance to ensure continued functionality, and costs associated with staff management and oversight of materials processing facilities.

Funds permitting, IMP provides pre- and post-award support for university faculty and staff for proposals for externally funded grants and projects that will be administered by the center.

In support of its academic research mission, IMP may also cost share, with faculty and staff, use fees associated with characterization of the materials processed or created as part of external research

programs administered by IMP. This can include fees charged by select university shared user facilities (the Applied Chemical and Morphological Analysis Laboratory (ACMAL), the Microfabrication Facility (MFF), and the Microanalytical Facility), and other use-fee supported facilities that exist to process or characterize materials.

IMP support of the above activities will be contingent on the availability of funds in the IRAD account.

3.0 Governance and Management

3.1 Membership in IMP

Membership in the center will be open to all university faculty, staff, postdoctoral associates, and adjunct faculty participating in research and graduate education in the broad area of materials, materials processing, and/or materials characterization. Members will be classified as Voting or Affiliated.

3.2 Voting Membership

Voting members will be those who have served as a principal investigator, co-principal investigator, or significant participant on externally proposed projects with budgeted overhead return at some point during the most recent three fiscal years. A significant participant is defined here as one who contributes to the scientific development or execution of the proposed project in a substantive way even though they are not listed as a Co-PI on the grant cover sheet. Voting membership may also be granted to faculty and staff that support center activities through other funding avenues, such as direct financial support of staff who are central to the materials processing capabilities on campus.

3.3 Affiliate Membership

Affiliated members are those that do not qualify as a voting member, i.e., are not involved in active IRAD-generating grant proposals or provide direct financial or in-kind support. Affiliated members can participate in all center activities and can request funding or cost-sharing, but they cannot vote on the appointment of the director or suggest changes to the center charter or any other action that requires a formal vote by the voting members.

3.4 Director and staff

3.4.1 Duties

A director will provide general oversight of the Institute, perform administrative functions, and make discretionary decisions regarding financial allocations over the course of the university fiscal year, within the guidelines and boundaries described below. The Director will serve three-year renewable term(s), with years aligned with the university fiscal-year (FY) calendar (July 1- June 30).

The director shall perform such duties and exercise such powers as are necessary or incidental to the supervision and management of the center and shall see that the center remains in good standing with its membership, partners, and the VPR. The director is responsible for meeting the requirements and guidance for MTU centers and institutes as provided by the office of VPR. Unless prohibited, the director may delegate some or all the duties and powers of their office; however, the director remains accountable

for proper and efficient performance of any delegated duties. Unless approved in advance by center membership, the director shall not receive salary (summer or academic release) from IMP funds.

Staff may be hired and supported using IMP funds to support the center mission, including a center manager, accountant, research scientists, proposal specialist(s), or other. Any new positions that affect the center budget or spending in a significant way (e.g., a commitment to regular salary) should be approved by the membership. Staff are considered Affiliate Members of the center but can become Voting Members if they meet the stated requirements.

3.4.2 Annual Report and Renewal

The Center Director will submit an annual report to the Vice President for Research (VPR) or appropriate entity as required, appropriate for public distribution and access by membership. The annual report will summarize the activities of the Center for the past year, including financials, progress on goals, plans, and other topics as required or requested by current VPR report formatting guidelines.

The Center is authorized and will be administered by the Director according to MTU policy. At the end of the Center's authorized 5-year term, the director, in consultation with the members, will seek renewal following VPR guidelines, and lead the effort.

3.4.3 Selection of the Director

The director is selected, renewed, or removed through a nomination and vote process from membership. The current director will request nominations for succeeding director during the 4th quarter of the fiscal year of the final year of the present term, but no later than 4 weeks prior to the completion of the term. Members, including the former director, can self-nominate for the position. Both the candidates for successor director and nominators must be voting members. Nominations for director must be received at least three weeks prior to the end of the current term in order to verify nominee(s) willingness to serve and establishment of the ballot. Voting will follow the balloting process described in Section 4.2. Should at any time a director not be able to continue in their role or resign her/his position before the end of the current term, a temporary director may be elected through a nomination and voting process as described above or appointed by the VPR.

Nominations to replace the current director for cause prior to the completion of the present term will be accepted beginning in the 4th quarter of the fiscal year (i.e., March 1st, yearly). Upon notification that a for-cause, off-schedule nomination for a director has been received, the director (or designee) will invite additional nominations from among the voting membership and will administer the vote in the same manner as described above for completion by the close of the fiscal year. Prior to initiating an early removal of the director, members are encouraged to consult with the Office of VPR to discuss cause and to seek possible alternative remedies.

4.0 Other activities

4.1 Charter Amendments

Proposed changes (additions, deletions, modifications) to the Charter can be initiated by voting members of IMP at any time during the fiscal year. The Director will work with the member(s) proposing the amendment(s) to develop the wording and placement within a modified Charter and will administer the vote. Notice of proposed changes must be provided to members for review 14 days prior to the opening of voting. Voting will follow the procedures described in Section 4.2.

4.2. Voting

Voting shall take place via ballot either electronically or in meetings of the whole where a quorum has been reached. For any meeting of the whole where business is conducted, a quorum will consist of 50% + 1 of all Voting Members. Votes via electronic ballot require notice to all members, a 50% +1 response rate of Voting Members, and should follow an opportunity for discussion of the matter. A motion will pass with a majority of votes, unless a larger vote is required as set forth in this charter or another authority. A voting period should typically last one week with notice of the voting period provided in the election notice.

4.3 Financial Management and Resource Allocation

The center is funded through the receipt of internal research and development (IRAD) funding provided by MTU in proportion to the total F&A charged on funded projects submitted through the center. The IRAD distribution amount is governed by MTU policy and has historically ranged from 15.5 – 20%. IMP staff can also receive funding through direct charging to external grants that are administered by IMP.

Members are invited to provide input on how resources are distributed in support of IMP's mission. Because requests for fiscal assistance are often unanticipated and with short time lines, the director will make day-to-day allocation decisions consistent and compatible with ongoing fund balances and within the boundaries of the current budget plan. The director shall have signing and spending authority consistent with the direction provided by membership. A spending summary is provided in the yearly annual report submitted to VPR and is publicly available to membership.

5.0 5 year strategic plan

5.1 Mission

The IMP mission is to provide support for, and promote, a unique suite of materials processing facilities such that they will be functional and available to provide a competitive advantage for faculty-led research, to support instructional and outreach activities, and to enable a "maker-culture" for student creativity, prototyping, and entrepreneurship.

5.2 Goals and Actions

1. Foster a community of scholars who conduct research in the broad area of materials processing, or whose research is enhanced or leveraged by access to material processing facilities.
 - a. Support community- and collaboration-building programs among members

- b. Develop and help navigate access to research infrastructure, including cost-share for advanced instrumentation relevant to materials processing that will be available for use by multiple members.
 - c. Encourage collaboration between IMP and other MTU research centers/institutes, departments, and facilities through MOUs, research hubs, collaborative proposals, and other opportunities.
 - d. Participate in discussions internal and external to Michigan Tech to sustain research and build capacity related to our core values.
2. Enhance member efforts to acquire external funds for research
- a. Identify funding opportunities and help researchers develop externally funded research proposals, in partnership with Research Development and other groups at Michigan Tech.
 - b. Support research by members across all disciplines through strategic discretionary spending that will (for example) sustain or maintain current facilities and infrastructure, seed grants, or laboratory improvements that could serve to expand research opportunities
 - c. Identify and lead large, multi-institution, interdisciplinary proposals related to our mission and vision
 - d. Sustain and grow IMP staff, as needed, to support and enhance pre- and post-award activities.
3. Support and grow internal and external partnerships and capacity to achieve novel broader / research impacts
- a. Assist with collaborations among members to bring research to the public through education, outreach and community partnerships
 - b. Pursue external partnerships to improve graduate student research and training through internships, fellowships, etc.
 - c. Build visibility of IMP research external to Michigan Tech (social media, marketing, agency visits)