

# **MONTANA**

**TECHNOLOGICAL UNIVERSITY**

## Principal Investigator's Handbook 2022 – 2023



## Quick Reference - Institutional Information

### Montana Technological University

#### Office of Research:

<https://www.mtech.edu/research/index.html>

1300 West Park Street

Butte, MT 59701

P: 406-496-4102

F: 406-496-4723

[grants@mtech.edu](mailto:grants@mtech.edu)

MUS 211

**DUNS Number:** 07-140-8496

**Unique Entity Identifier (UEI):** JJKGF97BMBE1

**Tax Identifier Number (TIN):** 81-6001654

**CAGE Number:** 1CZH4

**NAICS Number:** 611310

#### **Authorized Organizational Representative:**

Angela Lueking, Ph.D.

Vice Chancellor for Research and Dean of Graduate Studies

Montana Technological University

1300 West Park Street

Butte, MT 59701

## Executive Summary / Quick Facts

**Proposal Development:** The [Vice Chancellor for Research](#) is available to discuss new concepts and ideas for proposals. Set automatic alerts for funding opportunities in your area with [Grants.gov](#) or [Pivot](#) (includes societies and NPOs). Provide keywords to [Pre-Award](#) for your research topics and update your University research profile. Limited [seed fund opportunities](#) are available. One on one training is available for all PIs upon request.

**Pre-Award:** Contact [Pre-Award](#) to assist with proposal development, a thorough pre-application review, a checklist of submission requirements (formatting, eligibility requirements, mandatory forms, regulatory requirements, due date, etc.), and assistance (upon request) in grant writing. The Authorized Organizational Representative must approve a proposal prior to submission.

**Budget Development:** The [Director of Sponsored Programs](#) will assist with budget development, [cost share](#), [buyout](#), during proposal submission.

**Contracts:** The [Director of Sponsored Programs](#), overseen by the [Vice Chancellor for Research](#), is responsible for preparing and negotiating contracts and sub-contracts with industry, agencies of the State and Federal government, local municipalities, and nonprofit organizations. Cooperative efforts are encouraged with private and public partners to support research and creative activities that are consonant with Montana Tech's research, teaching, and public service missions.

**Award Administration:** The [Assistant Director](#) of Sponsored Programs oversees the fiscal and administrative management of sponsored projects, and is the liaison between the sponsor and MT Tech for finances and administration. The [Budget Analyst](#) processes all sponsored project related payables, pro-card transactions, and purchases orders. PIs are responsible for project and budget management, review and approval of all expenses, and all technical reporting. Time and Effort reporting is used to record time on sponsored projects.

**Intellectual Property:** The [Budget Analyst](#) will route an invention disclosure to the appropriate channels.

**Compliance:** The [Vice Chancellor for Research](#) oversees the entire sponsored award process at MT Tech, may negotiate awards with sponsors, and is the campus Authorized Official for awards. The [Director of Sponsored Programs](#) oversees financial reporting, compliance, and audit related tasks pertaining to sponsored programs.

**Undergraduate Research Program (URP):** The [Executive Assistant](#) to the VCR provides administrative support for the campus-wide URP.

The e-mail box [grants@mtech.edu](mailto:grants@mtech.edu) is always monitored, and its use can expedite processing of any proposal, grant, or contract.

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## WEBLINKS TO FORMS AND OTHER RESOURCES

NOTE: These supplemental materials are subject to change. All current documents can be accessed on the Policies and Forms page of the Research Office website (<https://www.mtech.edu/research/index.html>)

### Proposal Submitting

- [Proposal Certification Form \(PCF\)](#)
- [Seed Fund Opportunities](#)

### Budget Development

- [Indirect Cost \(IDC\) and Benefit Rates](#)
- [Indirect Cost Recovery Policy \(PDF\)](#)
- [Federally Negotiated Indirect Cost Rate Agreement \(PDF\)](#)

### Intellectual Property

- [Montana University System – Policy and Procedures Manual: Invention and Patents \(PDF\)](#)
- [Invention Disclosure Form \(PDF\)](#)
- [Student Patent Rights MOU Form \(PDF\)](#)
- [Student Agreement for Work on Sponsored Projects \(PDF\)](#)
- [Student Intellectual Property Rights MOU \(PDF\)](#)
- [Board of Regents 407 Submission Form - Example Board of Regents 407 Agenda Item](#)

### Conflict of Interest

- [Conflict of Interest Policy \(PDF\)](#)
- Conflict of Interest Disclosure form available from [Grants@mtech.edu](mailto:Grants@mtech.edu)

## Human Subjects Research Approvals

- [Institutional Review Board Process](#)

## Other Policies, Procedures, and Forms

- [Research office Quick Facts Sheet for PIs](#)
- [Employment Policy for Research Personnel](#)
- [Incentive Plan for faculty engaged in Externally funded Projects](#)
- [Research Integrity Policy \(PDF\)](#)  
[Procedures Supporting Research Integrity](#)
- [Advanced Payment Procedure for Sponsored Work](#)
- [Sales and Service Policy](#)
- [Montana Tech Safety Policy \(PDF\)](#)
- [Student/Visitor Incident Report Form \(PDF\)](#)

## Grant-Writing Resources

- [Writing Irresistible Proposals](#)
- [Quick Fact Sheet](#)
- [Writing Winning Proposals](#)
- [Proposal Preparation Schedule Template](#)
- Please also contact the Research Office for shared files/templates on appendix material, as well as additional proposal-writing resources.

## WHO SHOULD USE THIS HANDBOOK?

Activities conducted under Montana Tech's auspices carry an important public and personal responsibility for careful management. This handbook is published by the Office of Sponsored Programs (OSP) to help you fulfill that responsibility. It describes general procedures, policies, and services available regarding research and sponsored projects at Montana Tech. All members of the Montana Tech community—faculty, academic professionals, bureau researchers, staff, and students—who wish to conduct externally funded projects utilizing Montana Tech's facilities, personnel, or other resources must comply with applicable institutional policies and procedures.

### Process for Updating This Handbook

The material included in this handbook and the documents referred to within this handbook will be updated periodically to reflect changes in organization, policies, and procedures, and maintained electronically at on the Montana Tech intranet site. <https://www.mtech.edu/research>

Changes that are made to be compliant with federal, state, and/or local law will be made by the Vice Chancellor of Research, in consultation with the Chancellor and other officials within the Montana University System. In general, other changes that are made in University-wide research policy will typically be discussed with the Research Advisory Council prior to a policy change. Comments and suggestions for improvements to this guide are appreciated, and should be directed to the Office of Sponsored Programs located on the second floor of the Museum Building, near the Mineral Museum.

The staff of both the Research Office (RO) and OSP are happy to provide additional information and assist you with topics that may not be covered in this handbook.

A glossary of terms and acronyms is provided as [Appendix I](#).

## SPONSORED PROJECTS AT MONTANA TECH

**Sponsored project proposals and agreements are between Montana Tech, as the performing organization, and the sponsoring agency** for the purpose of funding and conducting research/other sponsored project activity at Montana Tech. Sponsored project proposals and agreements generally include, at a minimum: a scope of work, including deliverables; the budget for the research; and the project timeline or schedule.

Montana Tech is responsible for the overall management of the project with the principal investigator responsible for the project management, conducting the project, and doing the project reporting. When working with sponsors principal investigators are encouraged to have preliminary discussions with the appropriate

program manager at the sponsor regarding the research, but no project work or spending may begin prior to a proposal being processed and award document being fully executed.

Most grants, contracts, and other funding agreements from outside sources are sponsored projects. Projects that meet any of the following criteria are considered sponsored projects:

- The proposed project binds Montana Tech to a specific scope of work and final reports or other deliverables are required.
- Billing, separate accounting procedures, or reports of expenditures are required.
- Unexpended federal and state funds must be returned to the sponsor at the end of the project period.
- The project involves disposition of property, whether tangible or intangible, that may result from the project (e.g. equipment, records, inventions, copyrights, or rights in data).
- The project has a specified performance period or completion date.
- The funding source is a government agency (federal, state, or local), or an industrial sponsor (provided a specific deliverable or report is required).

Donations to Montana Tech, if they do not include any of the above conditions, are generally considered to be gifts, and the responsibility of the Montana Tech Foundation. Potential donors should be referred to the Montana Tech Foundation for processing and receipt of gifts.

When there is a question regarding whether external funding should be classified as a sponsored project, contact the Office of Sponsored Programs or the Office of Research.

### **Who Administers Sponsored Projects at Montana Tech?**

Although sponsored project awards may result from the Principal Investigator's professional expertise, the funds are awarded to Montana Tech. These funds may be spent only for the designated purpose, and they must be administered in accordance with the requirements of the sponsor. The Principal Investigator and Montana Tech are jointly responsible for carrying out the sponsored project according to the sponsor's guidelines and the project agreement.

When any faculty or staff of Montana Tech does not follow the procedures outlined in this handbook, including the pre-award process outlined below, the person does so as an independent entity/consultant, and must abide by relevant [University regulations for consulting](#).

### **Responsibilities of Staff within the Research Office and the Office of Sponsored Programs (OSP)**

The Vice Chancellor for Research (VCR) is responsible for oversight of research programs and other sponsored activities of Montana Tech. The VCR is Montana Tech's authorized organizational representative (AOR) and serves as the Chief Research Officer. The VCR provides leadership in the development of policies and

procedures to enhance the research mission while protecting programs and interests of Montana Tech. The VCR acts to build University-wide partnerships with outside entities, with the goal of enhancing the pursuit of research and externally sponsored activities. The VCR reports to the Montana Tech Chancellor, and oversees the Director of the Office of Sponsored Programs, the Center for Advanced Mineral, Metallurgical, and Materials Processing (CAMP), the Center for Environmental Remediation and Assessment (CERA), and in his/her joint role as Dean of the Graduate School, the Graduate School. The VCR is Montana Tech's authorized organizational representative (AOR) and serves as the Chief Research Officer. As Chief Research Officer, the VCR is responsible for oversight of compliance requirements applicable to the work, and reviews all proposals prior to submission and is responsible for negotiating and approving mutually binding agreements, sub-agreements, and subawards, assisted and advised by the Director of OSP.

The Executive Assistant to the VCR is responsible for coordinating and scheduling meetings with outside entities related to research and outside partnerships, as well as managerial oversight and administrative assistance for the Research Office. This position also coordinates all planning and logistics for the undergraduate research program (URP), as well as the Sloan Indigenous Graduate Program.

The Director of OSP is responsible for all pre-award and post-award financial matters dealing with Montana Tech grants and contracts. The Director of OSP acts as the fiscal liaison between PIs and sponsors, negotiating the cost and budget aspects of mutually binding agreements, sub-agreements, and subawards. Thus, OSP is required to review and approve all proposed budgets and budget modifications for new and continuing proposals. OSP is responsible for post-award compliance with sponsor financial requirements, such as financial reporting and invoicing, cash management, and account close-out procedures. OSP also responds to requests for fiscal audits of sponsored agreements, and in coordination with the VCR, prepares the facilities and administrative (F&A) cost proposal, negotiates the F&A cost rate, provides support for documentation of direct salary charges and cost share, performs special cost studies for recharge centers, and prepares management information reports on proposals and awards. The Director of OSP reports to the Vice Chancellor of Research.

The Assistant Director of OSP oversees the fiscal and administrative management of sponsored projects, is the liaison between the sponsor and MT Tech for financial and administrative concerns, is the main point of contact for the MBMG pre-award and post-award duties, and helps PI with all purchases/ services over \$5,000.

The Pre-Award Manager reports to the Director of OSP, and assists Montana Tech faculty and staff in their efforts to seek and secure external support for their instruction, research, public service, scholarly efforts, and creative activities. Pre-Award aids with proposal development, budget development, review, and submission. Pre-Award helps prospective PIs identify potential funding sources and strengthen the competitiveness of proposals.

The Regulatory Compliance Manager of OSP (currently joint duties with the Pre-Award Manager) oversees and implements the conflict of interest policy, PI training related to research, Responsible Conduct of Research Training, and other necessary PI training.

The Budget Analyst processes all sponsored project related payables, pro-card transactions, and purchases orders under \$5,000; and supports the intellectual property process.

### **Special Committees Related to Research**

*Research Advisory Committee.* The research advisory committee (RAC), as the name implies, is an advisory committee to the VCR on policies and programs to promote and enhance research and creative activities and other externally sponsored activities. Typically, membership involves includes departmental representatives (one per department) and staff persons involved in administering or supporting research. The committee shall consist of no less than 8 members selected from the research active faculty at Montana Tech by the Vice Chancellor for Research and Graduate Studies, with the advice and consent of the Chancellor. The Graduate Council and the Montana Bureau of Mines and Geology shall each have at least one member on the committee. The committee shall be chaired by the Vice Chancellor for Research and Graduate Studies. As needed, the Provost/Vice Chancellor for Academic Affairs, the Director of the Office of Contracts and Grants, and the Director of Physical Facilities shall be called to the committee meetings to further advise the board on research-related matters

*Radiation Protection; Safety and Health Committee.* Assigned to the Director of the Office of Environmental Health and Safety. Contact: Marissa Morgan, Director of Environmental Health and Safety. 406-496-4463

*Institutional Review Board (IRB).* Reviews, approves, and oversees human-subjects research. Montana Tech is included in the [IRB of the University of Montana](#) and has a representative on that committee. Contact: Scott Risser, Professor of Interdisciplinary Arts and Sciences, Member of University of Montana Institutional Review Board. 406-496-4845

## **ELIGIBILITY TO SERVE AS A PRINCIPAL INVESTIGATOR (PI) AT MONTANA TECH**

A Principal Investigator (PI) is the individual responsible for the preparation, conduct, and administration of a sponsored project. Anyone holding the following positions may be designated as a PI so long as they have attended a PI training:

- All Faculty (tenure and non-tenure track; Assistant, Associate, or Full Professor)
- All Staff

- All Post-Doctoral Researchers, Research Associates, or Research Non-Tenure Track Faculty

Principal Investigators on sponsored projects normally are regular employees of Montana Tech. (i.e. work for a period of six or more months by a Board of Regents Letter of Appointment, contract, or as a tenure-track faculty appointment.) Under very unusual circumstances, other individuals may serve as PI, but only after written approval of the Vice Chancellor for Research.

### Required Certifications and Trainings to serve as a PI

To submit a proposal at Montana Tech as a PI or coPI, the following trainings and certifications are required.

What Training	Who should Attend	Frequency	Why Attend?
Principal Investigator (PI) Training	Anyone wishing to submit Proposals	Mandatory 1 training prior to submitting proposals Recommended every 4 years	Required per <a href="#">BOR 401.C</a>  Learn what is required to be a PI and helpful information for proposals and grant management
Responsible Conduct of Research (RCR) Training	All staff and students engaged in research activities	Mandatory Every 3 years via Citi Training Programs	Required per <a href="#">BOR 401.C</a>  Compliance with <a href="#">NIH Policy</a>  Learn safe and ethical practices for research
Conflict of Interest Certification and Disclosure  (Training is via RCR module.)	All Montana Tech employees and students or others who design, conduct, or report research, educational, or public service activities.	Annual update of disclosure required	Compliance with <a href="#">BOR Policy 770</a>  <a href="#">2 CFR200.112</a>  Montana Tech COI policy
Human Subjects Training (IRB)	Any PI with a proposal involving human subject	Every 3 years via Citi Training Programs	<a href="#">45 CFR 46</a>  Gain an understanding on the protection of human subjects
Federal Export Control	Any PI that receives federal funding or applies for federal grants or enters into an International MOU	Mandatory, prior to working with controlled information via CITI Training.	<a href="#">CFR 910.366</a>  Understand the laws and regulations; and risk of non-compliance

The Regulatory Compliance manager in the research office will send reminders at the beginning of each semester for those faculty that need a refresher training to stay current on the frequency listed in the above table.

Email [Grants@mtech.edu](mailto:Grants@mtech.edu) for additional information and links to the trainings.

### **Responsibilities of the Principal Investigator (PI)**

The Principal Investigator is responsible for implementing the sponsored project in accordance with sponsor guidelines. The project implementation includes hiring staff and students; expending project funds; requesting the purchase of equipment, materials, and supplies included in the project; conducting the project as described in the proposal and agreed to in the award; preparing the technical reports for the sponsor; and providing information needed by OSP and/or RO for fulfilling their project administration responsibilities. Co-Principal Investigators (co-PIs) share these responsibilities with the PI.

## **PROPOSAL DEVELOPMENT**

An overview of the proposal process is provided in Figure 1. The types of proposals are as follows:

*Solicited proposal.* Solicited proposals are submitted to a specific funding source in response to a specific program announcement and should be written to address the guidelines issued by that sponsor for that program. Deadlines (receipt, time stamp from submission portal or submission email, postal or overnight delivery receipt, or postmark) may recur annually or several times a year. If the proposal will be submitted through a different institution (university or private industry) with some role and funds for Montana Tech, it is considered a sub-award proposal and requires Montana Tech review and approval prior to submission to the lead institution.

Tools to connect researchers with solicited opportunities and potential collaborators include:

1. <https://pivot.proquest.com>
2. [Grants.gov](https://www.grants.gov)

See also this [site](#). The Pre-award grant manager is also available to assist you in setting up automatic alerts based on key words and/or funding agencies to aid in the search for funding opportunities.

*Unsolicited proposal.* The PI develops the idea and uses the proposal to make a formal request to a sponsor for support, but not in response to a specific program announcement, but often, to a standing program at a government agency. To search for unsolicited funding opportunities, check the web site of the potential sponsor for available programs, and determine the availability and time period for which the particular program accepts unsolicited proposals.

*Response to a Request for Proposals (RFP) or Broad Agency Announcement (BAA).* The proposed project must respond to the specific work statement developed by the sponsor or negotiated with the sponsor.

*Informal Proposal, Pre-Proposal, or Concept Paper.* This is a description of the proposed project (a.k.a. white paper) that does not involve a commitment of University resources or a signature on behalf of Montana Tech, and would not result in an award. This is a mechanism for a PI to communicate to the potential sponsor a short scoping document (usually 1-3 pages).

*Informal Industrial Proposals.* In the case of a potential industrial sponsor, many discussions may proceed a formal proposal and “ball park” budgetary numbers may be discussed to agree to scope. However, a formal statement of work and delineated budget may not be sent to the sponsor without prior routing of the PCF. When/if the sponsor invites a full proposal, a [Proposal Certification Form](#) (PCF) is required.

*Renewal and Continuation Proposals.* A competing renewal proposal (also called a competing continuation) is a request for continued funding of a project for which funding is about to terminate. Non-competing continuation proposals, which request the next year's funding within a multi-year grant, usually consist of a progress report, budget, and other relevant materials such as research results, reprints, vitae for new personnel, etc. They may also include a report of expenditures including the residual balance and any budget carryover from the previous year.

Competing renewals must be routed and approved in the same manner as new proposals, including preparing a new PCF. For non-competing continuations, if the sponsor requires a proposal (not just a progress report), the proposal must be routed and approved in the same manner as new proposals. This procedure assures that appropriate officials at Montana Tech are informed of the current status and any changes from the original proposal before an institutional endorsement is provided.

*Subcontracts/ Subawards.* Projects requiring work to be done outside of MT Tech or needing consultants require sub-contracts to be issued through OSP. Principal Investigators should work with the Pre-Award Office to develop Memorandums of Understanding, Letter Contracts, Work Statements, and sub-contract budgets. Please refer to the procedures above.

*Memorandums of Understanding (MOUs).* Memorandums of Understanding (MOUs) are legally binding agreements that put into place the expectations for a partnership, and may commit Montana Tech resources. All MOUs should be reviewed by OSP, with additional consultation by UM legal if the Director of OSP deems this review to be necessary.

International agreements are subject to additional scrutiny, due to federal export control regulations and concerns. The Vice Chancellor for Research will provide

interested parties a standard MOU for [international agreements](#), which has been developed in consultation with UM legal. Any/all requests from a Montana Tech faculty/staff member for a new international partnership should be forwarded to the Research Office and/or Vice Chancellor of Research. The RO/VCR will discuss with the faculty/staff whether the standard form is sufficient to meet the needs of the international partner. Any changes to the standard form will be in consultation with UM legal. In general, international partnership agreements should identify a particular ‘champion’ that will be the point of contact for the agreement, such as a participating Montana Tech faculty/staff. Prior to approving the international MOU, the RO/OSP will:

- Determine the institutional history (including financial) with the proposed international partner;
- Discuss the standard MOU template with the initiating faculty/staff;
- Discuss any changes to the standard MOU template with UM legal;
- Require initiating faculty/staff to provide certification of export control training. <https://www.montana.edu/orc/exportcontrol/overview.html>
- Coordinate the required signatures, i.e. the MOU will be forwarded to the Chancellor for signature.
- The Chancellor will notify the initiating faculty/staff when the MOU is signed.
- The initiating faculty/staff and/or Chancellor will notify the international partner.
- The fully executed MOU will be housed in the Research Office and on the Research Office website, with a courtesy copy provided to Finance and Administration.

## Proposal Routing for Approval

Prior to submission, formal proposals must be pre-approved by the Authorized Organizational Representative (AOR), as a proposal is a commitment of Montana Tech resources and representation to the sponsor that Montana Tech is able to responsibly perform and administer any award resulting from the proposal, including faculty time, equipment, facilities, cost share, etc.

The internal pre-approval that denotes institutional authorization is obtained through a [Proposal Certification Form](#) (PCF). The PCF includes a checklist of questions to assure the budget, technical content, and commitment of Montana Tech resources. The PCF is required **BEFORE** the proposal may be submitted to the sponsor, and must be approved by the department head, dean/director, other involved parties, and Research Office. The PCF must be completed by the PI for all proposals, applications, or renewals submitted to outside organizations that seek financial support of research, creative activities, education, outreach and/or any other special projects that may result in a contract, grant, or other agreement with Montana Tech.

The PCF is used to obtain required internal academic and administrative approvals, to generate a transmittal letter for the proposal, if needed, and to accurately track

and report all research proposals at Montana Tech. The form is not sent to the prospective sponsor.

For proposals to industrial sponsors, although preliminary conversations may discuss scope and ballpark budget numbers, the PCF should be routed prior to sending a statement of work and delineated budget to the sponsor.

No PI may submit a proposal to an external sponsor, represent Montana Tech in contract negotiations, provide a detailed statement of work or delineated budget using Montana Tech logos, stationary, title, resources, etc. Only the AOR for the University may provide these materials to a potential sponsor on behalf of Montana Tech.

### Timeline

1. Identification of funding opportunities. Sign up for automatic funding alerts from either [Pivot](#) or [Grants.gov](#), peruse the web site of potential sponsors, and/or contact the Pre-Award Grant manager to assist you with your funding search.
2. Proposal Initiation: (time '0'). Identify the Pre-Award manager as soon as a proposal submission is planned. The Pre-Award manager is available to assist you in preparing your proposal, including:
  - a. Dissecting the solicitation, including an outline of critical content for proposal content based on stated review criteria,
  - b. Provide a checklist of required documents for submission and timeline,
  - c. Provide a proposal template tailored to the solicitation (upon request).
  - d. For Large Proposals ( $\geq$ \$500,000). The PI may discuss with the pre-award manager extra "red team" review, proposal writing/editing, and/or project management services available. These services are provided to enhance success rate of large awards and aid the PI in project management of these complex proposals.

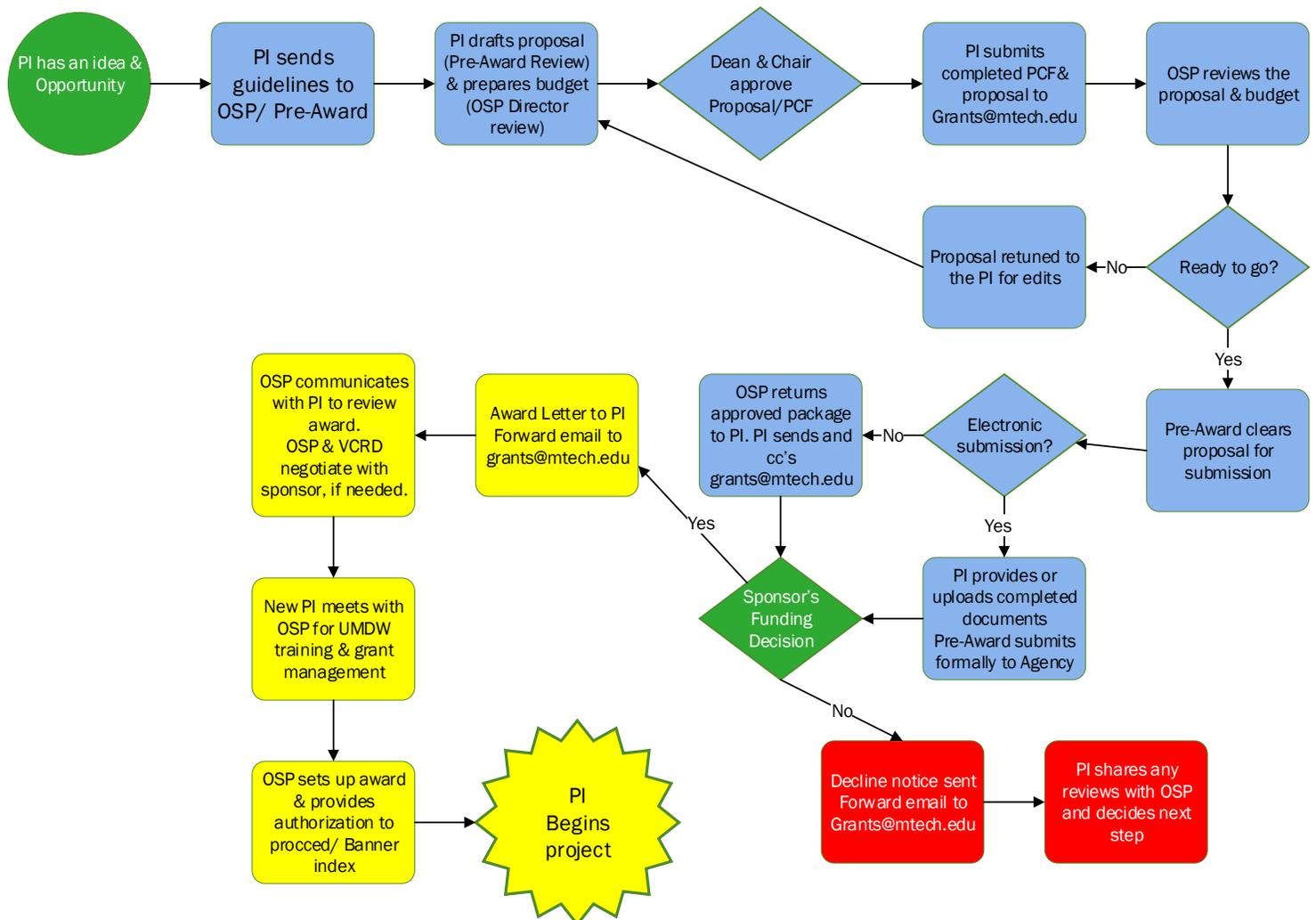
Please note that if the proposal is initiated less than one week prior to the due date, the pre-award manager will provide only (b).

3. At proposal initiation, begin discussing with the campus staff below the necessary certifications and approvals you will need.
  - a. Equipment Proposals (for equipment purchased  $>$ \$50,000): Schedule an appointment with the Director of Facilities to identify space, electrical and utility needs, and identify any necessary laboratory renovations. The Director of Facilities must approve the PCF for these proposals, and the Director of Sponsored Programs will ensure this approval is obtained on the PCF prior to submission. The PI assumes all financial responsibility for laboratory renovations when this approval is not obtained in advance.
  - b. IRB approval (for projects involving human subjects research or use of surveys): Montana Tech is included in the IRB of the University of

Montana and has a representative on that committee. Contact the IRB contact on campus before proposal submission. Allow at least one month (possibly more in summer) for IRB approval.

- c. Representations and Certifications: Some federal sponsors may require applicants to provide assurances, or sign certifications of compliance with a variety of federal requirements, whether or not they may be applicable to the proposed project. Examples include regulations regarding civil rights, lobbying, drug-free workplace, debarment and suspension, procurement integrity, and others. Work with the Pre-Award manager to complete the forms and obtain the authorized signature.
4. 10 days before submission (recommended). Budget: As you begin to develop your proposal, make an appointment with the Director of OSP for assistance in budget development.
    - a. If cost share (contributed effort or matching funds) is required, work with the Director of OSP to document the source of cost share. Any cost share needs to be disclosed on the PCF, with a record of written approval by the party providing cost share. The Director of OSP will require and maintain documentation of the cost share commitment. Any undocumented cost share is the responsibility of the PI and will be deducted from the PIs IDC account, if the proposal is awarded. See [Appendix VII](#) for Montana Tech best practice on identifying cost share.
    - a. Begin conversations with the Department Head and Dean if academic year salary will be included in the budget of the proposal. Proposals submitted without Department Head and/or Dean approval of academic year salary will be ineligible for buyout, and the budget will be renegotiated if awarded.
  5. 7 days before submission (strongly recommended). Begin routing the [Proposal Certification Form \(PCF\)](#), with a *near-complete draft* of the proposal text and "almost final" budget that clearly denotes necessary cost share. To facilitate routing, the PI should save the form as an e-fillable PDF to enable **electronic routing**.
    - b. The PI certifies reading and understanding the Montana Tech Policy on Conflict of Interest, Responsible Conduct of Research, and Federal Export Control. The Research Compliance Manager checks to see the training of PIs and coPIs is up to date.
    - c. Department Heads and Deans verify the commitment of faculty time, personnel, space, facilities, and/or equipment. (For proposals involving more than one department, all affected department heads and deans must review and approve the proposal.)
    - d. If academic year salary (a.k.a. faculty release time) is requested, approval of the Department Head(s) and Dean(s) are required.
    - e. Applicable parties verify cost-share obligations.

- f. If a new faculty position (temporary or tenure-track) is included, approval of the Provost and Vice Chancellor for Academic Affairs (VCAA) is required.
  - g. The Director of the Montana Bureau of Mines and Geology (MBMG) must approve proposals originating from MBMG staff.
  - h. Center Directors approve proposals originating from their administrative unit.
  - i. If the research involves Human Subjects [IRB](#) approval must be obtained.
  - j. If the project will require laboratory renovations, the Director of Facilities must approve.
  - k. If the research involves a unique hazard or will create non-standard hazardous waste the Director of Safety must approve.
6. 7 days prior to submission (optional). Editorial Services and 'Red-Team' Review: Montana Tech's Pre-Award Manager is here to assist faculty with meeting the requirements of the sponsor, and presenting the best case for funding. When sufficient time is allowed (at least 7 days), the Pre-Award manager and/or the VCR will review the proposal's narrative and abstract, and provide substantive feedback (e.g. does the narrative address the review criteria outlined in the solicitation; is the proposal responsive).
  7. 3-7 days prior to submission. The Pre-Award manager will review all necessary supplementary documents with the PI to ensure these are ready for submission.
  8. One day prior to submission (required). The final proposal text, budget, and completed PCF must be submitted **no later than 8 hours** before the close of business on the date of submission. When this deadline is not adhered to, the PI assumes all responsibility for uploading the proposal, format check, and cost match. Cost match may be renegotiated at the time of award. Submission of the final proposal by the AOR is still required.
    - a. In rare cases, when all signatures for the PCF may not be obtained 8 hours prior to submission, the VCR may sign on behalf of the Dean and Department Head. In so doing, the VCR commits the RO to all financial responsibility and cost share associated with the proposal, except those situations which are denoted the responsibility of the PI above.
  9. Day of Submission: The PI or coPI approves the final submission, and the AOR submits the proposal. The PI or CoPI should leave contact information with the Pre-Award manager for any questions or concerns that arise on the day of submission. The VCR is the Official/Authorized Organizational Representative (AOR) and is the only designated person who can commit Montana Tech to Grants and Contracts. The AOR or his/her designee must submit the final proposal.



## REGULATORY COMPLIANCE FOR SPONSORED PROJECTS AT MONTANA TECH

All persons conducting research activities and other sponsored work must comply with Montana Tech and MUS policies, regulations, and procedures. Verify all questions related to Campus or University policies with the appropriate Campus Department or Office responsible for that policy. Refer to the Faculty Staff Handbook on the faculty and staff resources web page (<https://mtech.edu/facultystaff/>) for additional information. Montana Tech's research-related policies are posted at <https://www.mtech.edu/research/research-tools/policies-forms/index.html>. Verify information related to research with the VCR.

## Required Training and Certifications

Principal Investigators must be current in required trainings to act as a PI, as noted in the eligibility section above.

## Ethical Conduct in Research

Montana Tech is committed to maintaining integrity and truthfulness in research and scholarship through the responsible and ethical conduct of its faculty, staff, and students. To this end, Montana Tech faculty must complete a Responsible Conduct of Research training and certification every three years.

Policy and procedures for dealing with alleged misconduct are available on-line ([Research Integrity Policy](#) and associated [procedures](#)). The Chancellor has designated the VCR as the Research Integrity Officer (RIO), responsible for handling inquiries and investigations into allegations of misconduct in research. Formal allegations of misconduct should be presented in writing and in a confidential manner to the VCR. After determining that an allegation falls under the misconduct policy, the VCR will see that the allegations are evaluated, first in an inquiry, then, if warranted, in an investigation as described in the [procedures](#). The VCR may convene a special committee to investigate specific cases. The University is committed to investigating allegations of research misconduct objectively, treating the accused person fairly, and protecting the person who reported the potential misconduct from retaliation. Deliberately false allegations of research misconduct will be treated as research misconduct.

Montana Tech is committed to maintaining integrity and truthfulness in research and scholarship through the responsible and ethical conduct of its faculty, staff, and students.

Principal Investigators should know and understand the policies surrounding research at Montana Tech. Contact RO for clarification, concerns or questions regarding policies or regulations.

## Conflict of Interest

In accordance with Montana University System's Policy 770, Montana Tech employees "must endeavor to avoid actual or apparent conflicts of interest between their university system duties and obligations and their personal activities, and between their university system duties and obligations and their professional activities outside the university system." Montana Tech faculty and staff must be alert to situations where they might have a personal interest, outside commitment, or other activities that could create a conflict. In particular employees, engaging in outside employment or activities must be familiar with and adhere to campus policy, state laws and federal laws regarding conflict of interest (COI) to ensure no questions or concerns about the quality of the

research could be raised due to a COI. Thus, personnel need to note that potential conflicts involving spouses, domestic partners, and close relatives are potential conflicts for the Montana Tech employee. The first step in minimizing the influence of COI is disclosure. PIs should keep their Department Head and Dean fully informed of potential COI situations, and ensure their conflict-of-interest disclosure and management plan (if needed) are up to date. The COI policy is available at <https://www.mtech.edu/research/files/conflict-interest-financial-disclosure.pdf>

Annual disclosure of actual or potential conflicts is required at the beginning of each academic year or as any change in personal circumstances may dictate.

## Disclosures of Conflicts of Interest

Montana Tech has a Conflict of Interest Policy, as described on the Research Office web page ([Conflict of Interest and Financial Disclosure \(mtech.edu\)](https://www.mtech.edu/research/files/conflict-interest-financial-disclosure.pdf)).

Faculty and staff engaging in ANY outside activities or outside employment must become familiar with Montana Tech's Conflict of Interest Policy and they are required to acknowledge this familiarity and compliance on the PCF. The Research Office will submit annual reports to Department Heads, Deans or Supervisors, and the VCR of potential conflict of interest situations.

Outside consulting requires approval (see [Faculty/Staff Handbook](#)) and should generally be disclosed on the COI form.

Any PI that advises a graduate student with external employment that may overlap with the student's research must also disclose this as a COI.

Any student, whether paid or unpaid, that has an influential role in designing, conducting, or reporting any of Montana Tech's research, educational, or public service activities is required to complete a COI disclosure, and it is the responsibility of their supervisor to ensure compliance of students they oversee.

## Human Subjects

Research projects involving human subjects may require review and approval by the University of Montana's Institutional Review Board (IRB). This approval **must** be obtained *before* the project starts, and be initiated when a proposal is submitted. Any modification to the research plans, scope, or protocol also requires approval in advance. In some cases, IRB approvals must be obtained *before* submitting the proposal for external funding. Contact RO well in advance of the proposal deadline for guidance and assistance. To access the most up-to-date IRB process: <https://www.mtech.edu/research/research-compliance/index.html>

## Laboratory Animals

Montana Tech does not have the procedures or facilities on campus to handle laboratory animals. The preferred approach is to collaborate with and use facilities at the University of Montana or Montana State University. Prior to using laboratory animals on campus, Montana Tech must meet all the regulatory requirements.

## Intellectual Property

Montana Tech is subject to the Montana Board of Regents' intellectual property policies (<http://mus.edu/borpol/bor400/401-2.pdf>). For any potentially patentable or marketable invention or discovery, the inventor should file an invention disclosure with the VCR as early as possible and request submission of a provisional patent application. The provisional application establishes the priority date for the invention. The inventor may not make public disclosure of the IP until the provisional patent is filed; public disclosure is likely to invalidate the patent process. The disclosure is reviewed and the VCR--advised by the Montana Tech IP Advisory Committee--either recommends pursuit of patenting and licensing the invention or determines if the invention can be released to the inventor/discoverer (many times the sponsor has rights to pursue a patent before the inventor).

The Vice Chancellor for Research will review the disclosure and send to the Patent Committee. The committee performs a comprehensive review of the disclosure and makes a recommendation to the Vice Chancellor of Research. If selected to file a provisional patent the patent manager will work with the inventor to file the provisional patent application. Patent Law gives priority to the "first to file," so a patent application or provisional patent application may be needed to establish a priority date. Over the next 8 months the inventor will need to continue research and strengthen the claim. The updated disclosure will be reviewed by the patent committee to determine if a non-provisional patent should be pursued. The patent manager will help the inventor select a lawyer to continue to process.

Many sponsored program agreements require submission of an invention disclosure report within a relatively short, defined time frame, as well as a patent and inventions report annually and/or at the close of the project. OSP will supply the patent and inventions report forms and coordinate the submission of any disclosure and/or periodic reporting to the sponsor. Patent disclosures may also be required as part of project closeout documentation.

See Patent Standard Operating Procedures in [Appendix IX](#).

## Other Regulatory Issues

Less common regulatory issues regarding safety, radiation, hazardous materials and respiratory protection are described in [Appendix VII](#).

## AWARDS

### How will I know if I get an award?

The PI and/or the Research Office (RO) will receive written or email notification of the sponsor's decision regarding the proposal. If you receive notification of award, please forward to OSP at [grants@mtech.edu](mailto:grants@mtech.edu) to ensure the award is processed in a timely fashion. Sometimes a PI receives a telephone notification that the proposal will be funded. Unfortunately, verbal notification is not sufficient for Montana Tech to authorize work to proceed so it often requires patience to await the written notification.

### Award Acceptance

Sponsored projects can be established formally at Montana Tech only after a proposal has been submitted and approved through regular internal review procedures, and an acceptable agreement is negotiated and signed by the authorized representatives of the organizations involved.

The Chancellor of Montana Tech has authorized the VCR to sign agreements on behalf of Montana Tech.

Award documents that require a signature for acceptance are to be signed by the VCR. Only those persons specifically authorized by the Chancellor may legally sign agreements for Montana Tech. In consultation with the PI, OSP will review the budget, terms, and conditions of the award before obtaining an authorized signature and, if necessary, will return the document for the sponsor's signature. The processes that follow formal acceptance of the award are covered in the section titled Project Administration.

### Publication Policy



Montana Tech will only enter into grants and contracts, if the results can be published or otherwise disseminated. This condition is to preserve an integral part of Montana Tech's educational mission, and these activities often form the basis for articles in professional journals, seminar reports, presentations at professional meetings, and student dissertations and theses.

For development work that may be competition sensitive, Montana Tech may agree to an information embargo for a specified duration. Alternatively, the agreement could specify ways that the results can be published in a thesis or dissertation without compromising the sponsor's proprietary interests (for example, by not providing the location of a study area). Copyrights and publication rights belong to Montana Tech and/or the author. Montana Tech may allow the sponsor to retain ownership of information, as long as Montana Tech has full publication rights as described above and the PI signs a statement acknowledging such.



## Intellectual Property

When reviewing your award, it is important to understand which party owns the IP used or produced from the funded project. Montana Tech is subject to the Montana Board of Regents' intellectual property policies, which are intended to promote the progress of science and technology, assure that discoveries and inventions are used to benefit the public, and provide recognition to the inventor(s) and Montana Tech. See the link listed for the MUS Policy 401.2 on Inventions and Patents:

<http://mus.edu/borpol/bor400/401-2.pdf>. The policy states that Montana Tech retains ownership to inventions and discoveries arising from its research whether patentable or not. When negotiating sponsored project agreements that may involve patents, RO will coordinate with the PI in negotiating terms and conditions involving patent rights or licensing agreements following the Montana Board of Regents policy.

Agreements with industrial sponsors may have IP owned by the company. Under contracts with industrial sponsors, the first right to negotiate for license rights is negotiated with the sponsor. If neither organization chooses to pursue the patent, the inventor may petition the sponsor for the right to pursue the patent at his or her own expense.

## Non-disclosure Agreements

When a sponsor or prospective sponsor wants Montana Tech to protect its confidential or proprietary information, or vice versa, a non-disclosure agreement (NDA) is used. Montana Tech will only agree to non-disclosure if all the Montana Tech employees involved in the work agree in writing to the terms, and to ensuring any students or others who might become involved later will also be informed that the information is proprietary and agree to be accountable. Otherwise, Montana Tech cannot be responsible for the protection of confidential or proprietary information. If a company-initiated NDA is used, it must be approved by legal; a pre-approved NDA template is available from the Director of Sponsored Programs. As Montana Tech's Authorized Official, the VCR, is the signatory, and all other parties involved in the research should also sign.

## Compensation and Payments

Contracts with for-profit sponsors are performed on a full cost recovery basis. Project budgets must include both direct costs and full F&A costs at Montana Tech's federally negotiated rate. Montana Tech requests payment or partial payment from for-profit sponsors in advance, since Montana Tech does not have a source of funds with which to finance sponsored projects. The schedule of payments is negotiable depending on type and scope of project, length of project period, and anticipated pace and pattern of actual expenditures.

## Use of Montana Tech's Name

It is Montana Tech policy that under no circumstances shall a sponsor be permitted to state or imply in any publication or other published announcement that Montana Tech has approved any product that is or might be manufactured,

sold, or otherwise distributed. Montana Tech also requires that its name is not used in connection with any advertisement, press release, or other form of business promotion or publicity, nor may a sponsor refer to an agreement with Montana Tech without prior written approval from the VCR.



### Visual Identity of Montana Tech

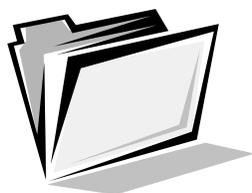
All publications, correspondence, and other communication originating from Montana Tech are subject to strict standards for visual icons. The guidelines are to insure consistency among visuals used to identify Montana Tech. Refer to Montana Tech's Logo Use and Downloads webpage for specific details on color, font, size, and logos. To download specific logos, see the Montana Tech Logo Use and Downloads webpage (<https://www.mtech.edu/pr/logo-use.html>).

### Best Effort

Since research by its nature is unpredictable and without guarantee of successful results, Montana Tech will not accept contract provisions that guarantee results, impose penalties for failure to make progress by firm deadlines, or allow withholding of payment if the sponsor is not satisfied with the results.

### Liability and Risk

Both constitutional and statutory restrictions preclude Montana Tech from contractually indemnifying another party. This is not intended to affect any common law or statutory rights to indemnity or contribution that either party may have against the other relative to an incident arising out of the performance of a contract. Montana Tech is self-insured by the State of Montana Risk Management Program and does maintain coverage for liabilities arising from the acts and/or omissions of its employees.



### State-Required Clauses

Montana Tech, as a State-supported entity, has constitutional and statutory requirements to insert in all contracts certain clauses dealing with non-discrimination, conflict of interest, non-appropriations, and arbitration. For further information, contact RO.

### Termination of the Agreement

In the event the sponsor for any reason terminates a funding agreement, the sponsor will be expected to reimburse Montana Tech for all costs incurred up to the date of termination and for all non-cancelable obligations. Any expenditure for which Montana Tech does not receive reimbursement is the responsibility of PIs and their departments.

## PROJECT ADMINISTRATION

The PI has primary responsibility for ensuring the technical success of the project while complying with financial and administrative policies and regulations. Refer

to *Policies Governing Research* in this Handbook for more specifics. For administrative matters, it will save time and energy to talk to OSP for many actions such as authorization to proceed, re-budgeting, prior approvals, and no-cost extensions.

For invoicing and financial reporting, PIs should contact the Director of OSP.

## Pre-Award Costs

Sometimes the technical officer at the sponsoring agency will inform Montana Tech that a project has been recommended for funding. If it is important to order equipment or begin a personnel-recruiting process prior to official notification from the sponsoring agency, contact OSP to determine whether a Banner index can be established early for limited use prior to the official award. There is always an element of risk in starting project work prior to formal award notification. Charging costs to another established account is not acceptable, since transferring charges from accounts can be problematic. Never charge expenses for one sponsored project to an account for another project or to academic department accounts. Instead, contact OSP before making any financial commitments to determine what pre-award approval process is available. **IF THE GRANT IS NOT FUNDED, ANY EXPENDITURES THAT HAVE BEEN INCURRED ARE THE RESPONSIBILITY OF THE PIs AND THEIR DEPARTMENT.**

Pre-award costs may be incurred within 90 days of the effective date for most grants from the National Science Foundation (NSF), the Public Health Services (PHS) includes the National Institutes of Health (NIH) and Center for Disease Control (CDC), National Aeronautics and Space Administration (NASA), Department of Energy (DOE), US Department of Agriculture (USDA), and some Department of Defense agencies. The VCR approval is required to request an account for pre-award costs and to authorize a non-sponsored account to cover the costs in case the award does not come through.

## Account Setup

When OSP receives the final, fully executed award document, an Authorization to Proceed Form, indicating the Banner index number, performance period, award amount and cost share requirement will be completed. OSP will send the PI an Authorization to Proceed Form with copies to the Department Head, College Dean, Center Director, or Director of MBMG.

Questions about the sponsor's policies on financial and administrative management should be discussed with the OSP.

## Personnel

Montana Tech's personnel policy applies to all personnel actions, including those funded by external sponsors. The Personnel Office or someone within your department with personnel responsibilities can assist with personnel actions.

Hiring policies are found on Human Resources web site:  
<https://www.mtech.edu/administrative-services/hr/index.html>.

## Hiring

The PI is responsible for initiating all hiring and payroll actions, and for supervising sponsored project personnel. The following information may aid you:

- Personnel must be paid in accordance with Montana Tech's guidelines. Salary rates, job classifications, and regulations for personnel employed on sponsored programs are established by Montana Tech.
- Letter Contracts for limited term and/or non-tenure positions supported by grants or contracts are processed through Human Resources (HR), and must be approved by OSP and the Chancellor. Contact HR for instructions.
- Currently employed faculty, staff, or students may be assigned to a sponsored project. Each department is responsible for processing such assignments with the help of the Personnel Office. The Financial Aid Office processes assignments for students.
- Individuals not currently employed by Montana Tech or employed at a different job classification may fill any sponsored project position. Individuals must be recruited, interviewed, and selected in accordance with Montana Tech's personnel procedures. Refer to the *Selection and Recruitment Manual* <https://www.mtech.edu/administrative-services/hr/index.html> before you advertise.

## Salaries and Wages

Any salary adjustment, including a merit increase, adjunct/instructor time must be consistent with institutional procedures. If a campus-wide salary increase is not authorized, employees working on sponsored projects will not receive pay increases even though funds may have been budgeted to cover the additional costs. Personnel benefits paid from a sponsored project account are subject to the same policies as personnel benefits paid from other funds. Contact the Personnel Office for additional information on policies and procedures. Inclusion of a specific salary estimate for a position in a grant budget does not mean that the person filling that position will be paid that amount.

Only actual costs are charged to the sponsored project, however, variances from budgeted amounts sometimes occur. If the personnel costs are less than budgeted, generally such savings can be used for other project-related purposes during the award period, assuming that the sponsor allows spending flexibility under the terms of the award.

## Vacation and Sick Leave Accruals

Eligible faculty and staff employed on sponsored projects accrue vacation and sick leave time. They are encouraged to use accrued vacation before the project's termination date. Faculty with academic year appointments do not accrue vacation benefits. See Montana Tech's Employment Policy for Research Personnel

for additional information: <https://www.mtech.edu/research/files/research-employment-policy.pdf>

### **Time and Effort Reporting**

The federal government requires effort certification. Time and Effort reporting is a federally mandated process that ensures the salary charged to a sponsored project is being certified by the PI as reasonable in relation to the effort spent on the project. It is subject to audit, and compliance is necessary to assure continued federal funding.

It is the PI's responsibility to make sure the actual level of effort corresponds to the reported level of effort, whether paid or contributed. Cost share in excess of the amount required by agreement is unnecessary and costly to Montana Tech.

### **Purchasing**

Purchase of goods and services for sponsored projects must comply with both the overall intent and specific detail of the sponsor's regulations, the purpose of the project, as well as with Montana Tech's policies. It is important to become familiar with the terms and conditions governing expenditures to ensure that all expenditures are allowable and are adequately documented to demonstrate how expenditures benefit the project.

It is essential that any purchase or other expense charged to the project clearly advances the project goals and be an allowable expenditure. The documentation should be sufficient to make the need for the expenditure evident to an outside reviewer. Keep in mind, that the PI's Department must cover any disallowed costs. Purchases initiated less than 90 days before the end of the project are subject to extra scrutiny and may be disallowed. It is difficult to justify their use for the project, if the project is nearly over.

### **Purchasing Procedures**

Procedures for purchasing on sponsored projects are generally the same as for other Montana Tech activities. Departments may already have someone who handles purchasing; if not, contact OSP for assistance. Some issues that are specifically related to purchasing on sponsored accounts are discussed below.

## **Purchasing Outside Services**

### ***Subcontracts and Subawards***

Subcontracts or subawards are used when the subrecipient is functioning as a co-investigator on the project, i.e., they are involved in a creative way in designing and/or conducting the sponsored activity and often the subrecipient's qualifications were instrumental in helping the university obtain the award. The program compliance requirements and other terms and conditions of the prime award are passed down to these subrecipients. To subcontract a portion of the work on a sponsored project to another organization or individual, provision must normally have been stated in the funded proposal or in subsequent written approval from the sponsor. Contact OSP for assistance before having any discussions with a potential subcontractor. Once a subcontract is approved by the funding agency, the PI initiates a requisition to establish a subcontract agreement with OSP. Subcontractors submit invoices directly to OSP. OSP confirms with the PI that the work has been done and that payment is authorized.

### ***Contracted Service Agreements/Purchased Services***

Generally, contracted service agreements are entered into with a vendor for the purpose of performing a specific objective within the scope of work. Typically, vendors provide goods or services within their normal business operations, and operate in a competitive environment where they provide similar goods or services to many different purchasers. The program compliance requirements of the University's award do not apply to the goods or services being provided and the terms and conditions of the award are not passed down to the vendor. The monitoring requirements of 2 CFR 200 and the Single Audit Act do not apply to contracted service agreements. Contracted service agreements are prepared by OSP and the Purchasing Department, please contact OSP first.

### ***Equipment***

Ideally, all equipment purchases for items costing more than \$5,000 (unit price) have been itemized in the proposal and approved in the original award. Any facility modifications must be discussed including a price quote for modifications with the Director of Physical Facilities prior to submitting the request to a funding agency.

Prior approval may be needed from the sponsor to buy equipment not previously authorized, and this approval may take several weeks. Some federal sponsors have delegated this prior approval authority to Montana Tech for most of their grants, and those requests can be quickly handled. Other agencies, such as the Department of Defense, also require specific prior approval of certain types of equipment (e.g. automated data processing equipment) and/or formal screening for equipment availability prior to purchase, even if the equipment is listed in the approved budget. The PI is responsible for verifying that approval is given prior to submitting any purchasing or payment requests. As a rule, general-purpose equipment such as office equipment and furnishings, modular offices, telephone networks, information technology equipment and systems, air conditioning equipment, reproduction and printing equipment, and motor vehicles will not be approved, unless its justified use is primarily or exclusively for the actual conduct of research or technical activities for the specific project.

### ***Purchases Near to Termination Date***

Items not received during the project period are not considered by a sponsor to be beneficial to the project and may be disallowed. Orders for supplies and equipment should be placed well in advance of the project end and account closure to ensure delivery and use by the project before project completion.

## **Travel**

Standard Montana Tech travel policies and procedures apply to travel on sponsored accounts *unless sponsor regulations are more restrictive*. Travel may be limited in terms of dollars and/or specific trips. If the purpose of the travel is attendance at a conference to disseminate research results, the travel authorization request should include a statement to that effect and the title of publication or lecture. Justify travel in terms of project benefit. To be allowable, travel must directly benefit the project rather than enhance the reputation of Montana Tech or the traveler.

Overspending the travel budget category (including domestic and foreign travel, separately) by more than 20% often requires prior approval from the sponsor. OSP is available to provide advice on travel restrictions for your particular project.



### **Foreign Travel**

Foreign travel often requires specific prior approval from the sponsor, and many sponsors require use of American flag carrier wherever possible. The Research office Requires all employees take Federal Export Control Training prior to foreign Travel Please contact the [Pre-Award Grant Manager](#) for access to the training. Most sponsors require written approval for each foreign trip, sometimes even if the travel was itemized in the proposal and included in the award budget. Requests for written approval of foreign travel should be submitted to the sponsor well in advance of the planned travel. Some sponsors require that the travel request be submitted 90 or more days in advance of the planned travel. Note that the Montana University System has requirements for registering foreign travel in advance. The PI is responsible for making the required registration in a timely manner.

For travel policies and forms, see the Accounts Payable website:  
<https://www.mtech.edu/administrative-services/acctspay/index.html>

## **Financial Management**

The university is the legal recipient of the award, and legally responsible to the sponsor for both performance and the proper use of sponsor funds. The university relies on the PI for performance of the project activities and for the administrative and financial management of the award. The PI certifies that expenses charged to

a restricted account are legitimate, project-related costs. The PI ensures performance of the technical aspects of the project and completion of required technical reports. The University will maintain adequate fiscal controls and ensure fiscal policies are applied consistently. In this way, management of externally funded projects is truly a collaboration between the PI and the University.

To comply with all the financial terms and conditions of the award, the PI ensures that costs are correctly charged according to the terms and conditions of the award. Each expense charged to the account must be directly related to the project, must be allowable under the terms and conditions of the award, and must be included in the sponsor-approved budget. Any questions concerning allowability of costs should be directed to OSP staff prior to incurring the cost. The OSP monitors expenditures against restricted accounts for compliance with university, state, federal, and sponsor guidelines to ensure policies are consistently applied.

The PI and the PI's department are responsible for any overruns or any costs that are determined to be unallowable by the OSP or auditors. It is therefore incumbent upon the PI to monitor carefully all expenditures charged to his/her accounts and to implement whatever procedures are necessary to ensure compliance with the terms and conditions of the award.

OSP provides to each PI a monthly budget report for each sponsored project. This report should be used by the PI to monitor the budget regularly. PIs can also access financial reports and detailed expenditure information through the UMDW portal.

## Budget Revisions

Because the budget approved by the sponsor was an estimate based on the PI's knowledge at the time of the application, it is not uncommon for the expenditures not to match the budget exactly. Small differences in expenditures compared to budget for specific spending categories are acceptable in most cases.

For large deviations once the project is underway, the PI should contact OSP. OSP staff will determine if a budget revision will need to be approved by the sponsor. When/if pre-approval for a budget revision was discussed with the sponsor, this should also then be reviewed and approved by the OSP. If total spending exceeds the overall amount authorized, this is the responsibility of the PI and department, as noted above.

## Cost Transfers

A cost transfer is the reassignment of charges between cost centers or budgetary departments. If a PI determines that a cost transfer is necessary and appropriate, a Cost Transfer request should be forwarded to the OSP within 90 days of the original charge, or, if at the end of a project, then at least 15 days prior to the final grant expenditure report due date, whichever comes first. OSP can provide a Cost-Transfer Form. The cost transfer request must be detailed and complete,

establishing how the transfer is aligned with project objectives, why the cost was not charged correctly initially, why the cost is a proper and allowable charge to the transferee project, and (where appropriate) steps to prevent similar errors in future. Insufficient data and/or inadequate explanations will be cause for requesting additional information to justify the transfer or returning the request to the PI unapproved. An explanation that merely states that the transfer was made "to correct error" or "to transfer to correct project" is not sufficient and will not be accepted.

Cost transfers will not be approved to remove cost overruns on the transferor project, as this is a violation of the federal regulation cited above.

Requests should be signed by the PI or designee for each sponsored program budget involved in the transaction. If this responsibility is delegated, written authorization must be maintained at the department level and with OSP. Designees should sign their own names followed by "for *Name of PI*." If the transfer involves a non-sponsored program account, an authorized departmental signature is acceptable for that account.

### **Cost Transfers After 90 Days**

Cost transfers must be managed in a timely fashion. Thus, cost transfers beyond the standard 90 days may be considered only when unique, unavoidable circumstances exist. Any requests for cost transfers beyond the standard 90-day allowance must provide an explanation justifying the unusual circumstance and why the need for a cost transfer was not identified in a timely fashion. PIs should review budget reports monthly to catch any charging errors promptly.

### **Corrections Where Cost Transfers Are Not Required**

Transfers necessary because of Business Services or OSP clerical errors may be initiated by the OSP staff without approval of the PI. Transfer of costs between object codes or sub-object codes within the same sponsored project do not require PI approval. These transfers can be initiated by an OSP accountant, explaining why the transfer to another object code is appropriate. As with all cost transfers, this correction must be made within 90 days of incurring the cost or prior to the submission of the final grant expenditure report, whichever comes first.

## **Cost Overruns and Unallowable Costs**

Ultimately, the PI and the PI's department are responsible for any overruns or any costs that are determined to be unallowable by the OSP or auditors. It is therefore incumbent upon the PI to carefully monitor all expenditures charged to his/her restricted accounts and to implement whatever procedures are necessary to ensure compliance with the terms and conditions of the award. All overruns or any costs that are determined to be unallowable by the OSP or auditors will be transferred off the grant to a departmental account.

## Cost Principles

Cost Principles used by Montana Tech are consistent with the Office of Management and Budget ("OMB") [final guidance](#) in the Federal Register entitled "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards" ("Final Guidance"), located at Title 2 of the Code of Federal Regulations ("C.F.R. Part 200"). This guidance outlines responsibility, reasonableness, allocability, and allowability of costs. The guidance also differentiates between allowable direct versus indirect (or Facilities and administrative costs, or F&A, costs). PIs should also refer to Montana Tech's [Facilities and Administrative \(F&A\) cost agreement](#) with the federal government and [MUS BOR Policy 404](#).

## Research Records Retention

Unfunded proposal files are maintained in the research office for 18 months, after which they are shredded.

For sponsored activities, the University retains all research records while the project is active, and for **10 years following project closeout per the [BOR Policy](#)**, unless otherwise specified by the sponsor. If legal or audit issues are raised, records will be retained for three years following resolution of such issues or the full 5 years, whichever is longer.

Such records include all original documents that pertain to grant funds, such as invoices, ProCard receipts, purchasing documents, student payroll documentation, travel, work orders, and charges for services such as the mailroom, motor pool, and bookstore.

The PI and department are responsible for physically storing records for all indexes associated with the project. If the sponsor requires a longer retention period and storage becomes problematic after five years, the department may contact OSP to make alternate arrangements.

## Invoicing and Reporting

### Financial Status

PIs will receive a monthly financial report generated and distributed by the university's accounting system (Banner). These reports should be reviewed to verify that the expenditures and encumbrances are correct and charged to the right account. The report also provides budget availability information. It can also be used to make projections based on your intended spending. Please contact OSP with specific questions.

### Invoicing and Financial Reporting

OSP will prepare and submit financial reports and invoices to the sponsor. OSP also operates in an accounts-receivable capacity and pursues prompt payment of sponsor commitments. Occasionally, difficulty in collecting amounts owed by sponsors arises. In this situation, PIs might be consulted as to whether it is in the best interest of the PI and Montana Tech to continue work on the project.

### **Technical Reports**

The PI is responsible for interim technical progress reports, deliverables involving technical results, and the final technical report.

### **Miscellaneous Reports**

OSP completes or coordinates the submission of the following reports that are often required for sponsored programs: contractor's release forms; contractor's assignment of refunds, rebates, and credits; patent reports; and property certification or inventory reports.

## **Facilities and Administrative Costs (F&A)**

Facilities and Administrative costs are costs incurred by Montana Tech that cannot be readily identified or associated with a single sponsored project or institutional function. Typical examples are utilities, public safety, building and equipment use and maintenance, libraries, student administrative services, personnel, payroll, academic and sponsored research administration, and purchasing. Current F&A rates are found on the Research Office webpage <https://www.mtech.edu/research/indirect-costs-benefits.html>. At Montana Tech, the F&A cost basis is based on the Modified Total Direct Costs.

### **Distribution of Recovered F&A Costs**

F&A cost recovery partially reimburses Montana Tech for actual costs incurred for the administration and support of sponsored projects at Montana Tech, including the administrative costs of complying with the various sponsor regulations. A portion of the recovered F&A costs is typically distributed to the PIs and their departments to enhance their research capability and maintain research equipment. The current distribution policy is located [here](#).

Pursuant to the 1989 Montana legislative intent, F & A's are to be expended for the enhancement of existing research programs, assistance to and encouragement of new research programs, and the general support of research.

## **Property Management**

### **Equipment and Facilities**

Property is considered capital equipment if the unit cost is \$5,000 or more (not including sales/use tax and freight) and has a life expectancy of at least one year. Note, however, that if you buy a computer, monitor, keyboard, and operating software all on the same purchase order, all four items will be considered capital if the aggregate cost is \$5,000 or more. If you purchase the items on separate

purchase orders, the capital equipment definition will apply to each item separately.

Any planned property purchases on a sponsored project should be itemized in the proposal budget and agreement. However, some sponsors and agreements still require specific prior approval on certain types of property, even if listed in the approved budget.

Operation and Maintenance of equipment may be charged as a direct cost on grants if and only if a rate is established by OSP based on national best practices to determine cost recovery of these expenses. The rates must be publicly posted on the web site. For equipment that does not have an established rate for operation and maintenance, these expenses are the responsibility of the faculty member that is the custodian of the equipment. For more information on cost recovery methodology see the [Policy for Sales and Service Accounts](#).

### **Management of Sponsored Property**

Sponsors require property purchased with their funds to be used only for the reason for which it was intended during the project period. Some sponsored property will remain the property of the sponsor and should not be integrated with Montana Tech property if it will lose its identity. Sponsor-owned property must be managed with strict control. Prior to purchase please discuss with the [Assistant Director of OSP](#).

### **The Montana Tech Purchasing Office**

The Montana Tech Purchasing Office is responsible for the property system, inventory, and audit at Montana Tech. This office maintains a two-year perpetual physical inventory cycle, tags all College and sponsored property, and maintains inventory records. In addition, the Purchasing Office is responsible for passing yearly audits, including those conducted by the Legislative Auditor Division, and various federal and state agencies.

## **Project Extension and Termination**

### **No-Cost Extensions**

If it is necessary to extend the project period (without requesting additional funds) to complete the project, such requests must be submitted at least 45 days prior to the grant end date. Different procedures are used depending on the type of award and sponsor. To request additional time, contact OSP with information describing why the additional time is needed to accomplish project goals. If an extension is needed and cannot be granted internally, OSP will need to request approval from the sponsor. The PI will need to submit a memo to OSP/RO that requests the extension, describes why the additional time is needed, how much time is needed, and how the remaining funds will be spent. Additional information may be necessary, depending on sponsor requirements. Extension requests should be sent at least 60 days prior to the scheduled termination (time period may vary depending on the sponsor's requirements). Note that the NSF provides one automatic 1-year no-cost extension, if the PI requests it through the online portal (research.gov), subject to AOR approval, at least 45 days before the

project end date. Additional extensions must be approved by the program officer, and must be requested no later than 45 days before the end date. Do not submit the final project report, if you are hoping for an extension. As soon as the final report is submitted, the project is over.

### Project Closeout

After the project's end date, no more expenses of any kind may be incurred. No salaries, purchases, subscriptions, or telephone fees beyond the end date may be paid.

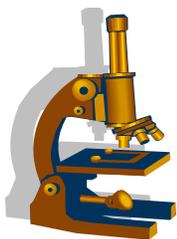
The Principal Investigator should arrange to move personnel paid on the project to an alternate funding source or advise them of pending layoff at least three weeks before the project ends. The 15 business day notice is specified in most of Montana Tech's employment contracts. The PI may also need to terminate maintenance agreements, remove telephones or change billing instructions, return leased equipment or take other action. Final reports are usually due on the program's end date or up to 90 days later. Bills for expenses incurred prior to the end date will be honored, paid by OSP, and included in the final financial report, even if invoices are received after the end date, so long as the invoice is dated prior to the project end date.

### Disposition of Waste



Notify the **Environmental Health and Safety Director** for procedures to dispose of any hazardous materials or waste. It is important to remember that there can be significant charges associated with the disposition of hazardous waste. If the charges were not budgeted for in your proposal, the costs will be charged to your department.

### Disposition of Property



Notify the **Assistant Director of OSP** for procedures to dispose of inoperable or unwanted property. In some cases, prior approval from the sponsor may be necessary. Never trade, cannibalize, or dispose of property purchased with sponsored funds without prior approval from the Montana Tech Purchasing Office.

## APPENDIX I: TERMS, ACRONYMS, AND DEFINITIONS

Some of the defined terms are not in the narrative portion of this handbook, but are included because they are commonly used in sponsored project administration.

### **Administrative Rules of Montana (ARM)**

The governing and regulatory rules of Montana.

### **Allowable Costs**

Determined by the Office of Management and Budget (OMB), the sponsor's requirements and/or College policy. 2 CFR 200 defines allowable costs as those that are reasonable; allocable to the project; given consistent treatment by use of Generally Accepted Accounting Principles (GAAP); and conform to any limitations or exclusions set forth by the sponsored agreement or 2 CFR 200. Contact the OSP for advice on questions regarding the consent of expenditures.

### **Assurances**

See Certifications.

### **Award**

Funds provided from an external sponsor for support of a project at Montana Tech. This term is used for both original award and supplements; it can mean moneys or equipment.

### **Banner Grant Inception to Date Report**

Monthly statements of expenditures are generated from this system.

### **Banner Index Number**

Also known as an account number, this code identifies each award within Montana Tech financial system.

### **Broad Agency Announcement (BAA)**

An announcement from a Federal Agency that is general in nature and that identifies areas of research interest, including criteria for selecting proposals and soliciting the participation of all offers capable of satisfying the government's needs.

### **Budget**

An estimate of expenditures to be incurred in the performance of a proposed statement of work.

### **Budget Category**

A portion of the budget designated for certain kinds of expenditures, e.g. salaries, operations, travel, equipment.

### **Budget Justification**

A narrative accompanying the budget explaining and justifying the budget.

### **Center for Advanced Mineral and Metallurgical Processing (CAMP)**

Montana Tech's, CAMP is a center of academic research excellence in materials science and engineering, mineral processing, and metallurgy performing research for industry, government, and academic sponsors.

### **Center for Disease Control and Prevention (CDC)**

A Federal agency of the Public Health Services and the US Department of Health and Human Services that sponsors research activities.

### **Certifications**

#### *Conflict of Interest (Disclosure of Financial Interest).*

For NSF and PHS an institutional representative to certify that the institution has implemented and is enforcing a written policy on conflicts of interest consistent with federal regulations, all financial disclosures required by the conflict of interest policy were made; and that conflicts of interests, if any, were or will be resolved prior to the institution's expenditure of any funds under the award, and will be satisfactorily managed, reduced or eliminated in accordance with the institution's conflict of interest policy and or disclosed to the agency (as required by the agency).

#### *Debarment and Suspension.*

A certification assuring the federal agency that research personnel and the institution are not presently declared ineligible for receiving federal support, have not been convicted of fraud or a criminal offense in the performance of a federal award, are not in violation of federal or state statutes, are not presently indicted for criminal or civil charges and have not within a three year period preceding the application had one or more federal, state or local transactions terminated for cause or default.

#### *Delinquent Federal Debt.*

A certification provided to the federal awarding agency that the applicant organization is not delinquent on the repayment of any federal debt.

#### *Drug-Free Workplace.*

A certification assuring the federal agency that the institution does, and will, continue to provide a drug free workplace as required by the Drug-Free Workplace Act of 1988.

#### *Lobbying.*

A certification assuring the federal agency that no federal appropriated funds or any other non-Federal funds have been paid or will be paid for influencing any federal official or employee in connection with the awarding of any contract, grant or agreement.

#### *Misconduct in Science.*

A certification that the institution has established administrative policies dealing with and reporting possible misconduct in science, and that it will comply with the policies for preventing, discovery, and requirements as published in the federal agency's regulations.

**Classified Research**

Research sponsored by a federal government entity and can be further defined as a national security information at the levels of Top Secret, Secret, and Confidential, and as being governed by the Department of Defense National Industrial Security Program Operating Manual (NISPOM) requirements. Classified Research can also involve restrictions imposed by agreement or otherwise on the distribution or publication of the research findings or results following completion, for a specified period or for indefinite duration.

**Cognizant Audit Agency**

The office or staff that is designated to perform audits on behalf of the federal government for sponsored projects at a university. The cognizant audit agency for Montana Tech is the Department of Health and Human Services (DHHS).

**Conflict of Interest (COI)**

A situation in which a person or organization is involved, or has the appearance of being involved, in multiple interests, financial or otherwise, and serving one interest could involve working against another.

**Conflict of Interest Certification**

See Certifications.

**Consortium**

A consortium is two or more institutions working on the same research project, either funded directly by the supporting agency or one prime institution subcontracting out the funds to the other members of the consortium.

**Consultant**

A non-employee individual whose expertise is required by the Principal Investigator to perform the research. (A consultant may be a paid or unpaid contributor).

**Contract**

A contract is an agreement between parties to acquire services that primarily benefit the sponsor. For an award to be considered a contract, it normally must contain all of the following elements:

1. Detailed financial and legal requirements with a specific statement of work to be performed.
2. A specific set of deliverables and/or reports to the sponsor.
3. Separate accounting procedures.
4. Legally binding contract clauses.

**Contractor Purchasing Systems Review (CPSR)**

A complete and in-depth review and evaluation by the US government of Montana Tech's purchasing system. This evaluation includes the Purchasing Department's system and RO's system for procurements issued under sponsored projects.

**Contributed Effort**

Effort expended on a sponsored project that is not funded by the sponsor. It is a form of cost share.

**Cooperative Agreement**

A funding mechanism which can be used by federal agencies when a program requires more agency involvement and restrictions than a grant but is less formal in terms of a deliverable than a contract.

**Co-Principal Investigator (Co-PI)**

An investigator who shares responsibility for the direction of a sponsored project with another Principal Investigator. (PHS/NIH does not recognize the concept of co-Principal Investigator).

**Cost Reimbursement Contract**

A type of contract whereby payments are based on actual allowable costs incurred in performance of the work.

**Cost Share**

College and/or non-sponsor resources provided in support of sponsored programs; includes contributed effort and matching funds.

**Debarment and Suspension Certification**

See Certifications.

**Delinquent Federal Debt Certification**

See Certifications.

**Department of Energy (DOE)**

A Federal Agency that sponsors research activities.

**Department of Health and Human Services (DHHS)**

A Federal Agency that sponsors research activities.

**Donated Property**

Property provided by an outside party for specific activities related to sponsored project and/or research activities of Montana Tech; title to the property passes to Montana Tech at essentially no cost.

**Drug-Free Workplace Certification**

See Certifications.

**Effort**

The amount of time usually expressed as a percentage of the total that a faculty member or other employee spends on a project. Effort is certified and documented through the Time and Effort reporting system.

**Employee Related Expenses (ERE)**

See: Fringe benefits.

**Environmental Protection Agency (EPA)**

A Federal agency that sponsors research activities.

**Equipment**

Generally, articles of non-expendable, tangible personal property having a useful life and an acquisition cost which meets or exceeds the established thresholds for defining equipment. Equipment is not a replacement part or component returning a piece of equipment to its original condition. If a component increases the capability of the original equipment and has an acquisition cost that meets or exceeds the established equipment cost thresholds, it is considered a capital item.

**Expanded Authorities**

Policy implementation by some Federal granting agencies, which delegate certain prior approval authorities to grantee institutions. This delegation allows for internal College approval of administrative and spending actions, thus avoiding delays in project progress.

**External Support**

Funding for research, training or public service programs provided by federal or private sources outside Montana Tech.

**Fabrication**

Equipment that is constructed by combining or assembling modular components and/or materials into one identifiable unit. Procurement of the components and/or materials may preclude open competition and may require the cooperation of the Principal Investigator, RO, and Purchasing.

**Firm Fixed-Price Contract**

A type of contract whereby payment is not based on actual costs expended, but upon a mutually agreed upon price, Statement of Work, Schedule and Deliverables.

**Foreign Travel**

Foreign travel includes travel outside of the United States and its territories and possessions (Guam, American Samoa, Puerto Rico, the Virgin Islands, and the Canal Zone) and Canada. A trip is considered foreign travel for all legs of the itinerary if the traveler does not return to his/her post prior to departure for foreign destinations.

**Formal Proposal**

Any proposal submitted by a College employee to an outside entity that may directly lead to an award. All formal proposals require an institutional endorsement by the Vice Chancellor for Research.

**Fringe Benefits**

Also known as employee-related expenses. Employer costs for retirement, worker's compensation, federal social security, unemployment tax, unemployment, and health insurance.

**Full and Open Competition**

The solicitation of bids from prospective suppliers that is used to assure that every responsible bidder is permitted to compete for the procurement.

**General Purpose Equipment**

Equipment that is not limited to use for research, scientific, or other technical activities. Examples of general-purpose equipment include office equipment and furnishing, air conditioning equipment, reproduction and printing equipment, motor vehicles, and automatic data processing equipment.

**Gift**

A unilateral transfer of money, property, or other assets to the recipient for the recipient's ownership and use by a donor who makes no claims on the recipient in connection with the gift. Gifts normally have the following characteristics: the statement of work allows the Principal Investigator significant freedom to change emphases within the general area of work as the project progresses; no deliverables are involved; separate accounting procedures are not required; benefits of the project are to accrue to the nation and the world; sponsor has no audit rights; and no regulatory issues are involved, such as human subjects or animal care.

**Governmental Donated Property**

Property donated or transferred to the institution by a municipality, county, state agency, or the federal government.

**Government Furnished Equipment (GFE)**

Equipment provided to Montana Tech by the Federal government or government contractor. The title may or may not remain with the government.

**Grantee**

A grantee is the recipient of a grant. When Montana Tech accepts a grant award, on behalf of an individual, it becomes the grantee.

### **Hazardous Waste**

A waste or combination of wastes as defined by the Administrative Rules of Montana. *Refer to Treatability Study Regulatory Guidance in the Inserts.*

### **Hazardous and Solid Waste Amendments (HSWA)**

The 1984 Amendments in which the EPA defines a hazardous waste. Refer to Treatability Study Regulatory Guidance.

### **Human Subjects**

A Human Subject is a living individual about whom an investigator conducting research obtains data through intervention or interaction with the individual or identifiable private information.

### **Identifiable Information**

Information from which the identity of the subject is or may be readily ascertained or associated.

### **Facilities and Administrative Costs (F&A)**

Also referred to as overhead, overhead costs, indirect costs (IDC) or administrative costs. F&A costs are actual costs incurred to conduct the normal business activities of an organization that cannot be readily identified or directly charged to a specific project or activity.

F&A costs are real, auditable costs incurred by Montana Tech each time it accepts an award for a sponsored project. If Montana Tech does not collect full reimbursement for these costs, other College resources must be used to subsidize them.

### **F&A Rates**

The rates used to recover the indirect costs of a sponsored project. Negotiated, approved rates are to be used for all agreements with the federal government and for most non-federal projects, as allowable. Information on current indirect cost rates is available from OSP.

### **Informal Proposal**

A short (generally 2-5 pages) description of the proposed project that does not involve a commitment of College resources or a signature on behalf of Montana Tech. An informal proposal may include a total cost estimate but does not include a budget and is not expected to result directly in an award. The purpose of an informal proposal is usually to inform and interest the potential sponsor enough to request a more detailed formal proposal. Also, sometimes called a letter proposal, mini-proposal, preliminary proposal, pre-application, or concept paper.

### **Informed Consent**

The voluntary agreement obtained from a subject (or the subject's legally authorized representative) to participate in research or related activity, before participating in that activity. The consent must permit the individual (or legally authorized representative) to exercise free power of choice without undue inducement or any element of deceit, fraud, force, duress, or other form of coercion or constraint.

**In-Kind Contribution**

A non-cash commitment (such as contributed effort, facilities use, or supplies) to share the costs of a sponsored project.

**In-State Travel**

Travel within the borders of Montana.

**Institutional Authorized Official**

*(Also called Authorized Organizational Representative-AOR)*

Individuals authorized by the Board of Regents to sign grants, contracts, and agreements on behalf of Montana Tech.

**Intergovernmental Agreement (IGA)**

An agreement whereby two or more public agencies of the state may contract with each other if the governing bodies of each agency authorize such contracts and that the contracts are executed in accordance with Montana law.

**Invitation to Bid**

Also known as a Request for Proposal (RFP). Written documents soliciting pricing and/or technical proposals to supply goods or services as specified in the requesting document. Correct use of RFPs constitutes full and open competition.

**Key Professional Personnel**

Key professional personnel (or key personnel) are all individuals who participate in the scientific development or execution of the project. Typically, key personnel have a Ph.D. or MD, but may also include the master's or baccalaureate level, provided they contribute in a substantive way to the research.

**Letter of Inquiry**

A letter of inquiry is initiated by an applicant to determine if a proposed project is within a private agency's fundable program areas and to request agency policy and program information, instructions and forms.

**Letter of Intent**

A letter of intent advises a funding agency that an application will be submitted in response to their solicitation. The letter may contain general program information, unofficial cost estimates, and a request for specific application guidelines, instructions and forms.

**Limited Submission**

A funding opportunity in which the sponsor limits the number of applications an institution may submit. Typically, these funding opportunities restrict an institution to submit 1 or 2 applications. OSP coordinates a review process for selecting the most competitive applicants.

**Lobbying Certification**

See Certifications.

**Loaned Equipment**

Property provided by an outside party for use by the institution for sponsored project or research related activities; title to the property does not pass to Montana Tech.

**Matching Funds**

A cash commitment to share the costs of a sponsored project.

**Modification**

Any change made to an existing sponsored agreement.

**Modified Total Direct Costs (MTDC)**

All direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

**Montana Hazardous Waste Administrative Rules (related to Treatability Studies)**

The specific part of the Administrative Rules of Montana (Title 17, Chapter 54) that deals with Hazardous Wastes, Treatability Studies and related regulations.

**Montana Bureau of Mines and Geology (MBMG)**

A Department of Montana Tech and a non-regulatory applied research agency of Montana that provides advisory, technical, and informational services on geology, mineral, energy, and water resources in the State.

**Montana University System (MUS)**

Montana's Office of the Commissioner of Higher Education, its Board of Regents, and 11 public institutions of higher education including five community colleges, three regional bachelor's/master's institutions, one special focus institution (Montana Tech) and two doctoral-granting "flagship" campuses. Five additional community colleges are part of one of the other universities.

**Montana Department of Environmental Quality (MDEQ)**

The State Department that enforces ARM policies related to hazardous wastes.

**National Aeronautics and Space Administration (NASA)**

A Federal agency that sponsors research activities.

**National Institutes of Health (NIH)**

A Federal agency of the US Department of Health and Human Service that sponsors research activities.

**National Science Foundation (NSF)**

An independent Federal agency that promotes advancement of scientific and engineering progress through competitive sponsored research activities.

**No-Cost Extension (NCE)**

Provides for an additional period of performance to accomplish project goals. May be handled internally in certain circumstances or sought externally from the sponsor.

**Occupational Safety and Health Administration (OSHA)**

The administrative body that enforces rules regarding worker safety.

**Office of Sponsored Programs (OSP)**

The Office responsible for review and approval of all proposal budgets and any other financial matters of proposal budgets. OSP is also responsible for generating financial reports, responding to audits, negotiating cost rates, cost shares rates, and other financial information.

**Office of Environmental Health and Safety (OEHS)**

OEHS is the office responsible for coordinating and overseeing hazardous materials, generation of hazardous waste, disposal of hazardous materials, OSHA regulations, and most other safety issues at Montana Tech.

**Out-of State Travel**

Travel outside the borders of Montana.

**Peer Review**

A process utilized by some federal and private agencies, whereby committees of research investigators in the same area of research or with the necessary expertise review and recommend applications to the funding agency.

**Public Health Services (PHS)**

A Federal agency of the US Department of Health and Human Services that sponsors research activities.

**Principal Investigator (PI)**

Typically, a faculty member who submitted a proposal that was accepted and funded by an external sponsor. The PI has primary responsibility for technical compliance, completion of programmatic work, and fiscal stewardship of sponsor funds.

**Program Income**

Gross income earned by a research grant recipient from the activities, part or all of which are borne as a direct cost by the grant.

**Project Director**

See above for Principal Investigator; terms used interchangeably in this Handbook.

**Proprietary Research**

Research sponsored by non-governmental entity or individual that involves restrictions on the distribution or publication of the research findings or results following completion, for a specified period or for indefinite duration.

**Re-budgeting**

Process by which funds available for spending are reallocated between budget categories to allow best use of funds to accomplish project goals.

**Request for Applications (RFA)**

Any resulting awards would normally be funded by a grant. The RFA instructions include the information necessary to complete the application and mailing instructions

**Request for Proposals (RFP)**

Also known as an invitation to bid. A RFP contains the detailed information that must be supplied in the proposal. The proposal procedure is often complex and must satisfy specific requirements. Any resulting award would normally be funded by a contract.

**Research and Related Activities**

All formal investigative efforts (whether or not funded) by faculty, students, and staff that are designed to develop or contribute to generalized knowledge, including analyses of secondary data.

**Research Office (RO)**

The Office is directed by the Vice Chancellor for Research and Graduate Studies. Staff assists the Vice Chancellor in his/her duties of managing all research and contract activities involving College property and faculty.

**Resource Conservation and Recovery Act (RCRA)**

The 1976 act in which the EPA defines a hazardous waste and other related issues.

**Restricted Account**

An account where the funds are constrained for a detailed purpose the must be adhered. In sponsored programs this includes, at minimum: a specific statement of work, a line item budget, and a specified period of performance.

**Single Source Acquisition**

Issuing an award to a subcontractor without full and open competition. This may be done if an award is the result of collaboration (where two parties jointly develop the ideas, concepts, and methodology). There are restrictions on the use of this means of procurement and documentation must show justification for using single source acquisition.

**Site Visit**

An agency-initiated review of a proposed project conducted at the applicant's institution.

**Sole Source Acquisition**

A procurement that does not provide full and open competition but is effected because only one source is available.

**Special Purpose Equipment**

Equipment that can be used only for research, scientific, or other technical activities.

**Sponsor**

An external funding source which enters into an agreement with Montana Tech to support research, instruction, public service or other sponsored activities. Sponsors include private businesses, corporations, foundations and other non-profit organizations, other Colleges, and federal, state and local governments.

**Sponsored Research Agreement**

A contract between the University and a sponsored for the purposes of funding and conducting research at the university.

**Subcontract**

A contract issued under a prime contract, agreement, purchase order, or grant for the procurement of services or program-related tasks. Issuance of subcontracts under federal prime award are subject to compliance with federal law and all subcontracts are subject to the terms and conditions of the prime award and the normal purchasing requirements of the State of Montana and Montana Tech policy.

**Time and Effort Report**

Effort reporting and certification form required for compliance with federal regulations.

**Total Direct Labor Costs**

The portion of direct costs on which the indirect costs are based, namely: salaries and wages, plus fringe benefits.

**United States Department of Agriculture (USDA)**

A Federal agency that sponsors research activities.

**UPAS**

A UPAS form is used to request an account for pre-award costs and to authorize a non-sponsored account to cover the costs in case the award does not come through.

**Provost and Vice Chancellor for Academic Affairs**

The approval of the Vice Chancellor is required for any requested faculty release time.

**Vice Chancellor for Research (VCR)**

The Vice Chancellor for Research oversees all grant, contract, subcontract, and research activities involving Tech Employees or property. The Vice Chancellor is the Authorized Organizational Representative and can sign agreements on behalf of Montana Tech.

## **APPENDIX II: CAMPUS DIRECTORY OF KEY OFFICES**

### **Research Office**

Dr. Angela Lueking, VCR  
Museum 211  
406-496-4106

Victoria Pagan, Executive Assistant & Grad School Program Manager  
Museum 211  
406-496-4102

### **Office of Sponsored Programs**

Joanne Lee, Director  
Museum 213  
406-496-4769

Sara Lester, Assistant Director  
Museum 212  
406-496-4176

Tim Tutty, Pre-Award Grant Manager  
Museum 212  
406-496-4340

Vacant, Budget Analyst  
Museum 212  
406-496-4727

### **Office of Environmental Health & Safety**

Marissa Morgan, Director  
CBB 003  
406-496-4463  
(Also Radiation Safety Officer)

### **Montana Bureau of Mines and Geology**

John Metesh, Director  
NRB 317  
406-496-4159

Vacant  
NRB 317  
406-496-4153

## APPENDIX III: WEB ADDRESS DIRECTORY OF KEY RESOURCES

### MT Tech Home Page-Research

<https://www.mtech.edu/research/>

### MT Tech Home Page-Library

<https://www.mtech.edu/library/>

### University of Montana Research Home Page

<http://umt.edu/research/>

### University of Montana NSF EPSCoR Home Page

<https://www.mtnsfepscor.org/>

### Grants.gov

<http://www.grants.gov>

### National Science Foundation Home Page

<http://www.nsf.gov>

### National Science Foundation—Research.gov

<https://www.research.gov>

### Community of Science

<http://pivot.proquest.com>

### US Department of Energy

<http://www.doe.gov>

### US Environmental Protection Agency

<http://www.epa.gov>

For announcements and application instruction:

<https://www.epa.gov/grants>

### University of Montana Research

#### Funding Sources Page

For Federal Funding Sources:

<https://www.umt.edu/research/ORSP/propdev/funding/federal.php>

For Non-Federal and State Funding Sources:

<https://www.umt.edu/research/ORSP/propdev/funding/nonfederal.php>

For International Funding Sources:

<https://www.umt.edu/research/ORSP/propdev/funding/international.php>

## Appendix IV: Proposal Submission Checklist

### Determining if you are ready to submit your proposal

Before you submit your proposal to the sponsor, be sure that you confirm the following:

- ✓ The OSP has reviewed and approved the proposal budget.
  - ✓ The department head, dean, and OSP have reviewed and endorsed the proposal plans and narrative.
  - ✓ The participating and authorized personnel have signed the PCF (PI, co-PI and correlating department chairs, deans, director of OSP, and VCR).
  - ✓ The necessary information, certifications, and forms to comply with the sponsor's requirements are included in the proposal.
  - ✓ The proposal has been compiled in the proper order.
  - ✓ If a paper submission, the correct number of copies requested by the sponsor are included.
  - ✓ If an electronic submission, the format and submission method are as required.
  - ✓ The sponsor's checklist and requirements have been reviewed, and the proposal includes all the required parts and addresses all the factors important to obtaining excellent reviews.
  - ✓ OSP has a complete copy or e-copy to file.
  - ✓ Any required cover letters have been prepared.
  - ✓ Any required support letters have been obtained and are included.
  - ✓ The envelope has been addressed properly or the electronic submission method has been verified and communicated to OSP.
- ❖ Be sure that when you send your proposal, it will reach its destination by the specified deadline.
  - ❖ If the proposal requires an e-submission (online portal), make sure to follow the same procedures, but communicate the submission method to OSP well ahead of the deadline.

## Appendix V: Suggestions for Increasing Probability for Proposal Success

1. Develop your idea. Contact others who will or could be involved (colleagues, college and department administrators, outside groups, etc.) or have resources or expertise needed.
2. Search for a funding source. Visit OSP for information and assistance with your search and check Agency web pages for some funding sources and current Requests for Proposals. For private (non-government) funders, Montana Tech's Library has full access to the Foundation Center's databases and books. Acquire guidelines and application forms and instructions from potential sponsors.
3. Communicate with the sponsor. Send a white paper well in advance of the deadline to get preliminary feedback and introduce yourself. Volunteer to serve as a reviewer for federal agencies to further build these relationships.
4. Make full utilization of the resources available on campus to assist you, including the Pre-Award Grant Manager at [grants@mtech.edu](mailto:grants@mtech.edu). Send the solicitation and a list of required documents to the pre-award grant manager for review and advice. Once the OSP is notified of an incoming proposal, a proposal file will be created and we will help shepherd your proposal through the review and approval process. This includes but is not limited to coordinating budget review, proposal development/review, assisting with any approvals/signatures on forms, completing forms, ensuring compliance with sponsor guidelines, and proposal submission (if needed).
5. Before writing your proposal, write a one page overview and/or outline, and request a pre-review from a trusted mentor and/or the Pre-Award Grand Manager or the VCR.
6. After writing the full proposal, get an objective pre-review. Use colleagues and/or OSP to provide a friendly peer review and critique your proposal to help you improve the clarity and competitiveness. This step is important! RO can help researchers find an internal pre-reviewer. Time is needed, so have a draft at least two weeks before the deadline.
7. Often drafting a budget that is within the sponsor's guidelines helps to determine the scope of the work that can be completed. Consult the budget section above for information and tips on how to draft a budget.
8. Complete the PCF and other supplementary documents (i.e. IRB, cost share approval, CVs, current and pending, etc.) early, such that the remainder of "crunch time" can be spent working on the technical content of the proposal. Route the PCF early to avoid a last minute rush on technicalities—the PCF may be routed with a proposal draft and "almost final" budget.

## General Format for Formal Proposals

Many sponsors supply standard application forms or have a prescribed format for proposal preparation. Many sponsors require a specific font, line spacing, and margin size. Most sponsors also have page limitations and other requirements, making it particularly crucial to meet all requirements on the narrative. Be sure to read and reread all instructions related to the proposal EARLY, and to read them again before finalizing the proposal to be sure you have addressed all required topics and the review criteria and are complying with the formatting requirements. It can be helpful to extract the requirements and review criteria in a concise check list for this purpose. If forms are provided, use them (application forms for most federal and many private sponsors may be obtained from OSP or from the sponsoring agency's web site). Failure to follow requirements may jeopardize a proposal's success or have a proposal returned without review.

For sponsors without specified formats (typically private sponsors), a suggested organization of the proposal is as follows:

- Title Page and/or Application Form
- Abstract/Project Summary (one page or less)
- Table of Contents
- Project Description: Introduction, Problem Statement, Hypothesis and Goals and how they connect with and support the mission and goals of the sponsor, Preliminary Studies and Literature Review, Methodology, Management, Evaluation, Dissemination
- References (Literature Cited)
- Budget, Budget Justification, and Project Schedule
- Current and Pending Support for each PI and co-PI (usually only for Federal agency proposals)
- Description of Facilities and Equipment
- Letters of Support, letters of collaboration, letters confirming eligibility, or other specific documents required by the sponsor
- Appendices and Vitae/Bios for key personnel

## What to Include in Your Proposal

### Title Page and/or Application Form

If a standard application form is not required, the title page should contain enough information to clearly identify the proposed project and offer the following:

- Project Title
- Identification of the sponsor's program (RFP or program number)
- Name and address of sponsor
- Name and department of the PI
- Name and address of Montana Tech
- PI and authorized official's signatures, their titles, offices, and phone numbers.
- Date of Submission and/or Deadline Date

### Abstract/Project Summary

The abstract should be a condensed version of the proposal of a page or less, and it should concisely state the connection of the proposal with the sponsor's mission and priorities, the significance of the project, what will be accomplished, how it will be accomplished, and the proposed period of performance. The abstract is vital in creating a favorable first impression. Proposal writers often write the abstract last. Some sponsors require a specific format.

### Table of Contents

A typical Table of Contents should identify the page numbers and other requested material as well as appendices and other additional information. Often sponsors request that proposals be organized in a specific order, the Table of Contents should be organized to match. Some web portals for proposals prepare the Table of Contents automatically.

### Project Description (also called Project Narrative)

In the proposal guidelines, the funding organization often specifies what to include in the narrative. The description should answer basic questions about the project: *What problem/need do you address with your project? Why is it important to the sponsor? What do you plan to do? Why is this work important? What have you or others already done on the project? How does it build on the state of the art? How do you plan to achieve your objectives? Is the project accomplishable within the stated period of performance?* State the goals, aims, or objectives for the project. If it is a research project, state the hypothesis clearly. Provide enough detail to explain what you intend to do and how you will carry out the project. What are the potential challenges and back-up plans, in case the approach does not work. Objectives should match the need statement, and procedures should describe how objectives would be accomplished. Experts in your field will review this section of your proposal thoroughly. If the project requires an evaluation component, your "logic diagram" and evaluation approach would be included in the project

description. Many sponsors also require discussion of how project results will be disseminated (i.e. conferences, journal articles, newsletters, travel to meetings, or by other means). Some sponsors require a description of the management approach, timelines or milestones, and organization. Clearly address any review criteria published by the sponsor.

For the best chances of receiving funding, the project description should:

- Present how interesting and important the project is and how it fits the sponsor's mission and goals.
- Convince the reviewers that it can be accomplished.
- Convince the reviewers that it can be accomplished by the PI and team at Montana Tech.
- Be written to interest and be understood by the sponsor and likely reviewers.

### **References (Literature Cited)**

List full references of any citations made in the project description or body of the proposal and ensure that all references used are up to date. Using updated references demonstrates to experienced reviewers that the work proposed is on the cutting-edge, and for reviewers less expert in the specific topic, it provides the background or foundation on which the study is proposed.

### **Management Plan (often part of the Project Description)**

Identify all contributing faculty and staff members, describe their project duties, and emphasize their experience as it relates to the project. Include current biosketches for all key personnel (e.g. faculty, staff and consultants). Biosketches are usually included in the appendices unless otherwise specified. They should be provided in the format requested by the sponsor. If no format is specified, a 2-page bio is usually sufficient. Sponsors rarely desire full *curriculum vitae*.

### **Budget and Budget Justification**

Developing the budget is often the most difficult part of preparing a proposal. Since a proposal budget may become an award budget, careful front-end preparation is important. The budget should include the funds you will need to accomplish the work. Your department head, or director, other faculty, and the Director of OSP can help brainstorm the funding needs. The budget justification is a narrative or bulleted explanation of the budget request. It should be organized in the same categories as the budget table. The Director of OSP can assist in interpreting guidelines and completing budgeting forms. If the sponsor does not provide standard budget formats, contact OSP for assistance. For more information on budgeting, contact OSP (406-496-4176).

### **Current and Pending Support**

Some sponsors require a list of pending proposals and active awards for all the key personnel listed on a project. This document would include the name of the proposal, sponsor, active dates, total budget, and level of activity and time

commitment (in calendar months, academic months, summer months, or percent effort). Be sure to follow the sponsor's guidelines on formatting and contents.

### **Facilities and Equipment Description**

Describe the physical facilities, resources, policies, and equipment available at Montana Tech that are important to the project, and explain how they make Montana Tech an advantageous location for the project. (In some cases, the equipment may be used as a basis for providing matching funds for the grant.) Please contact the RO for an updated list of Tech's available facilities/equipment.

### **Letters of Support or Collaboration**

Obtain letters of support/commitment from all individuals or organizations mentioned in the narrative, especially if the individual has been designated as an important collaborator or consultant, or if the organization is named as a subcontractor, or has agreed to provide matching funds for the proposal. In many cases, a letter of support from Montana Tech (Chancellor, Provost, Dean, VCR, or Department Head) will be required or beneficial. In other cases, support letters are prohibited. Provide a draft for your Montana Tech letter of support well in advance (outside institutions may also request drafts or will be responsible for drafting their own letters of support) and the RO can help arrange for these letters. Contact the Director of OSP for additional information, if other organizations will need to be paid from project sources. Contact RO for suggestions on letters that would be helpful for the specific proposal. Note that verbatim identical letters of support from partners or collaborators are not as useful as individualized ones.

### **Consultants/Subcontractors**

If an outside organization or individual has been named in your project as a subaward entity, subcontractor, or consultant, be sure to provide sufficient detail throughout the proposal and in the budget narrative about any work to be performed and funds necessary for these groups to perform the work. Copies of the proposed statements of work and budgets (quotes) by outside organizations should be included in proposals as well as a signed letter of commitment. Information from outside entities should be signed by their authorized organizational representative.

### **Appendices and Biosketches**

It is a good idea to provide a separate list of all appendices, especially when there are many or large appendices attached to the proposal. This list helps to organize any proposal consisting of many different parts and makes it less confusing to the reader. Oftentimes, although the PI may consider the information in the appendices to be crucial to the overall proposal, this information is less important to the review committee. **The proposal narrative must include any important information, be able to stand alone, and not depend on any information in the appendices.** Any important graphical information in support of the proposed project should be included in the body of the proposal and not in the appendices. CAUTION: Reviewers are not required to read appendices or other supplemental material. In some cases, including certain types of appendices may

cause the sponsor to return the proposal without review. Be sure the supplementary material to be included IS permitted by the sponsor.

If not already required elsewhere, copies of the biosketch for the PI and other key collaborators proposed in the project should be included in the appendices. Unless a longer version is explicitly allowed, it is best to provide a biosketch no longer than 2 pages. Some sponsors have specific formatting requirements (e.g. NSF and NIH), and the proposal can be returned without review if the biosketch does not comply.

## Appendix VI: Calculating Your Budget

The proposal budget provides the framework within which the expenditures for the proposed statement of work will take place. The OSP can provide valuable assistance in preparing the project budget. A proposal budget lists and groups the proposal expenditures into categories. For ease in working within Montana Tech's financial system, the major budget categories are:

- **Direct Costs:** Personnel (Salaries & Wages, Fringe Benefits), Supplies and Expenses, Subcontracts, Travel, Student/Participant Support, Capital Expenditures.
- **Facilities and Administrative Costs** (previously called indirect costs).

A discussion of the costs that should be included in a proposal budget follows. This discussion is not comprehensive since only the more common costs are specifically mentioned. Keep in mind, when preparing your proposal budget, that the items should be consistent with the project description. The more realistic the budget, the easier it will be to work within the budget when the project is funded.

### Direct Costs

Those expenses that will be incurred solely for work on the proposed project. Provide justification to establish the need and benefits of the proposed spending to the project.

#### *Personnel*

*Salaries and Wages.* List the amount of time to be spent by each Montana Tech employee who will work on the project and the rate of pay. Time can be shown in percent of full-time effort or in person-hours, days, weeks, or months. Percent of full-time effort, months, or hours are the preferred methods, because days and weeks vary by pay period, and using these units can create discrepancies in budgeting estimates versus actual costs.

- Compensation on sponsored projects must not exceed an employee's authorized base rate of pay at Montana Tech. OSP can provide assistance in obtaining information on salaries for employees. For multi-year projects, the budget should add potential salary increases. Note that Montana Tech manages salaries and wages. Use of a specific percentage for salary increases does not cause the salary to increase by that amount.
- New positions must conform to Montana Tech employment classifications and compensation norms.
- Additional justification for administrative, secretarial, or clerical positions is required, because this type of support is not generally included as direct costs.

*Fringe Benefits.* Known as "employee-related expenses" (ERE), are employer costs for employee benefits including: retirement, worker's compensation, federal social security (FICA), unemployment tax (FUTA), leave assessment, and health insurance. There are different budgeting rates for faculty, staff, and students. To

find the most up-to-date fringe rates, check <https://www.mtech.edu/research/indirect-costs-benefits.html>

### ***Supplies and Expenses***

- Materials and Supplies: may include lab supplies, teaching aids, office supplies, and “equipment” costing less than \$5,000 each.
- Publication Costs: anticipated cost of publishing the results of the research including page charges, poster production, and reprint costs.
- Consultants: personnel who provide professional service for a fixed period of time and are not Montana Tech employees. Consultants should be budgeted only where on-campus expertise and collaboration expertise does not exist or is not readily available. May include fees and travel expenses. The use and payment of consultants is often restricted; therefore, discuss it with OSP.
- Photocopying, telephone costs, mailings, equipment, rental and/or lease.
- Space and equipment rental, renovation, and renovation as appropriate. (These expenses are typically covered by F&A)
- Hazardous Waste Disposal Costs (Contact the Montana Tech Office of Environmental Safety and Health).

### ***Subawards/subcontracts***

Include the proposed subcontractor's statement of intent to participate in the project if funded, including a statement of work, estimate of time required, proposed budget, and an AOR signed sub-award letter of collaboration. **This signed letter is required by Montana Tech, even if it is not required by the sponsor.**

### ***Travel***

Itemize each trip and include transportation costs, number of travel days, registration fees for conferences as appropriate, and per diem. Any travel outside the US and its territories or Canada should be listed separately as foreign travel, since it usually requires specific authorization from the sponsor. All travel is subject to Montana Tech and sponsor regulations.

### ***Student/participant support costs***

Books, tuition, stipends, travel, etc., if allowed by sponsor. Participants are individuals the project is intended to benefit. Tuition payments on behalf of a graduate student doing research for the project are participant costs, but the student’s assistantship stipend would be listed as a personnel expense. For a summer program, the travel costs, lodging, meals, and any stipend would all be considered participant support costs.

### ***Direct Sales of Research, Services, and Rent***

Rental, research, and campus services are allowable so long as the rates are reasonable and necessary for the project. On campus charge out rates must be established prior to invoicing the project. The scope and pricing of the activity must be reviewed bi-annually and approved by the Vice Chancellor for Research

and the Vice chancellor for Finance and Administration per the [Sales and Service Policy](#).

For assistance establishing rates, contract the Office of Sponsored Programs.

### **Capital Expenditures**

Expenditures for the acquisition cost of capital assets (equipment, buildings, and land), or expenditures to make improvements to capital assets greater than \$5,000 that materially increase their value or useful life. Acquisition cost means the cost of the asset including the cost to put it in place. Acquisition cost for equipment, for example, means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost that equals or exceeds \$5,000. Shipping, taxes, insurance, and installation charges should be included in the acquisition cost. (However, these costs are not considered when determining if an item meets the \$5,000 or more per unit capitalization criteria.) Equipment rental costs should be listed under operations costs. (Montana Tech's full F&A rate includes equipment maintenance and repair so it should not be explicit in the budget; an exception would be if the equipment is *only* being used for this specific project, or if F&A is not allowed or only allowed at a low rate for the project).

### **Facilities and Administrative Costs (F&A)**

Facilities and Administrative costs or "overhead" include all activities essential to support sponsored projects that cannot be directly charged to a specific grant or contract (e.g. lab and office space; utilities and building maintenance; equipment maintenance; administrative services such as secretarial, purchasing, accounting, human resources; and library resources). F&A cost percentages or rates are determined through a detailed cost accounting procedure and are negotiated with the federal government. Facilities and Administrative rates are applied to Modified Total Direct Costs. For the most up-to-date F&A rate see:

<https://www.mtech.edu/research/indirect-costs-benefits.html>

A few sponsors limit the allowed F&A costs. If applicable, discuss the F&A limitation with the VCR and/or the Director of OSP early in the planning and proposal-writing phase.

Montana Tech charges the full allowable F&A rate on all contracts and grants, unless lower limits are set by the sponsor or MUS policy.

### **Cost Sharing and Matching Funds**

In some instances, Montana Tech may be requested or required to contribute to the costs of a sponsored project. Cost sharing obligations must be met between the effective start date and end date of the agreement. If the obligation is not met, the sponsor may reduce the project funding and any costs not funded must be paid from departmental non-sponsored funds. Montana Tech is subject to audit on any quantified cost sharing. All cost sharing proposals must have consent of the VCR, Director of OSP, and your Department Head and Dean or Director of MBMG or other Center director.

*Contributed Effort (payroll and fringe benefits).* It is advantageous to select items for cost sharing that are easy to document. One such cost is effort of employees supported by non-sponsored funds, who will be contributing to the project. Commitment of Montana Tech employees' time to a project must be authorized by the appropriate Department Head and/or Dean or MBMG Director and approved by the Director of OSP. Contributed effort is documented and certified with time and effort reports. The individual's time as well as associated fringe benefits and F&A charges may be included in calculating these costs. Uncompensated effort, such as summer salary for faculty, cannot be used as match.

*Other Direct Costs.* Other types of cost sharing, such as matching funds for equipment or supplies, should be discussed in detail with your Department Head and Dean. Tuition waivers for graduate students working on the project can be used as match if approved by the Department Head and Dean of the Graduate School. The source of contributed funds must be explicitly indicated in the PCF. If required by the sponsor, the source and type of match or cost share must be detailed in the proposal. If the grant is awarded, documentation of actual cost sharing is primarily the responsibility of the PI and department. Minimal systems exist to document non-personnel cost sharing and thus some costs can be burdensome to document, e.g. telephone and copying charges. Talk to the Director of OSP about the feasibility of documenting costs prior to making any commitment of non-personnel matching funds. Any matching committed, whether "cash" or "in-kind" must be specified on the PCF and approved by the Director of OSP and VCR.

*Unrecovered F&A.* If the sponsor requires a lower rate or waiver of F&A, the difference between Montana Tech's rate and the sponsor's allowable rate can be shown as cost share, if not prohibited by the sponsor.

## Appendix VII: Cost Share Best Practices

1. Montana Tech will not provide or support any matching/cost share for proposals where it is not explicitly required by the RFP.

2. In cases where the RFP explicitly requires cost share, the following process will be followed:

a. First, the time [salary, proportional benefits, and associated overhead] of the PIs will be used as match, assuming that such time is available and not already committed.

- A PI may commit up to his/her fractional research appointment, i.e. when 15 credits are the standard departmental teaching load, the number of hours assigned to research may be used as cost share. For example, if a faculty member is teaching 6 credits per semester, with 3 credit hours of service and 6 hours of research, then 6/15 (40%) of the faculty member's salary may be used as cost share. When the assignment is 9 credits teaching, 3 credits service, 3 credit hours of research, then 3/15 (20%) may be used as cost share.
- It is recommended that the PI commit only up to 90% of the research appointment, i.e. 36% in the 40% example. If 100% of the research fractional appointment is committed, this implies the PI will *only work on that research project during the academic year, and no time will be allocated to other research projects*.
- Faculty may not commit the fraction of their salary that is allocated for administration, service, or teaching.

b. Next, the *anticipated* fraction of IDC that will be returned to the PI(s) (if the proposal is awarded) will be used. Please refer to the Montana Tech cost share policy for the current IDC return procedure.

c. Finally, the VCR will negotiate with the Dean(s) and Provost to identify any remaining necessary funds.

Unrestricted "cash" contributions from the Research Office will typically be applied towards equipment, provided sufficient funds are available. PIs requesting cost match of equipment should send a brief description of the equipment and a quote to the Vice Chancellor of Research.

All remaining cost share from Montana Tech is dependent upon availability of funds, and will typically require a match between the Research Office, the PI(s), the Department Chair(s), and the Dean(s) subject to further negotiation.

## Appendix VIII: Additional Regulatory Issues

### Safety Issues

Projects that involve any of the issues listed below are subject to special review processes to assure compliance with federal, state, and/or Montana Tech regulations and to ensure the health and safety of those involved in the project. Principal Investigators (PIs) are responsible for obtaining the approval of the Director of the Office of Environmental Health and Safety (EH&S) before submitting proposals for external funding. To access the most up-to-date safety policy:

<https://www.mtech.edu/env-health-safety/index.html>

#### Radiation Safety

Principal Investigators are individually responsible for ensuring the use of radiation sources complies with Federal, State, and University standards. Projects involving radioactive materials, ionizing-radiation-generating equipment, and lasers must be coordinated with EH&S. For the most up-to-date information on radiation safety:

<https://www.mtech.edu/env-health-safety/safetyprogs/docs/radiation-safety-manual.pdf>

#### Hazardous Materials

All research and teaching activities involving the use of hazardous materials or generation of hazardous wastes must be reviewed and approved by EH&S. For the most up-to-date information on hazardous materials:

<https://www.mtech.edu/env-health-safety/docs/hazardous-materials-management-plan.pdf>

#### Respiratory Protection Program

According to OSHA 29 CFR 1910.134, Montana Tech is responsible for adhering to strict provisions set for the use of respirators in preventing human exposure to potentially harmful, airborne contaminants. Contact EH&S for clarifications on this topic, or other OSHA standards that may affect teaching or research activities.

<https://www.mtech.edu/env-health-safety/safetyprogs/docs/respiratory-protection-program.pdf>

#### Treatability Studies

All research and teaching activities are subject to Hazardous Waste Administration Rules of Montana (ARM) 17.53.501 which adopt and incorporates the Code of Federal Regulation, 40 CFR 261.4(e) and (f). The regulations require a 45-day Notification of Treatability Studies and Waste Management Permits. Principal Investigators MUST contact EH&S about ALL treatability studies. EH&S is responsible for required notifications and acquiring permits, but responsibility for paying fines will fall on PIs and their departments. Protect yourself and your department. For more information on the Treatability Study Regulatory Guidance or to help determine if your research would fall under the Treatability Study rules, contact EH&S.

## Appendix IX: Patent Standard Operating Procedures

Research Office, Standard Operating Procedure: Tracking / Managing patents

Invention Disclosure to Provisional Patent to Non-Provisional (a.k.a. Full) Patent

1. Initial disclosure and preliminary review:
  - a. Inventor sends inquiry or [invention disclosure](#) to [VCR](#). (If sent to someone else in RO, they forward to VCR).
  - b. Inventor may not make public disclosure of IP of invention until provisional patent is filed with the US patent office. Public disclosure is likely to invalidate the patent process.
  - c. VCR reviews initial disclosure for: proper funding assignment, alignment with Tech strategic goals; involvement of faculty and/or students, and proper citation in inventor list; past patents in the topical area, past disclosures of inventor(s), related work by others faculty at Montana Tech
  - d. After review, VCR forwards disclosure to RO patent manager.
  - e. Patent manager logs the invention disclosure into the patent tracking spreadsheet (T1 in spreadsheet), and forwards the disclosure to the Chair of the Patent Committee. [1 month alert is set.]
2. Filing of Provisional Patent
  - a. Patent Committee does a more comprehensive review of the invention disclosure, within one month of "T1". chair does preliminary review of patent, in consultation with VCR's preliminary review
  - b. Committee chair convenes patent committee for discussion, in order to provide a written recommendation for "Go/NoGo" decision on provisional patent to VCR.
    - i. Committee chair convenes committee in any format convenient to the committee.
    - ii. Committee chair should record substantive feedback/discussion items
    - iii. In exceptional occasions, committee may discuss international patent filing (in addition to US filing). International filings are anticipated to be rare.
  - c. VCR makes final "Go/NoGo" decision, based on budget, programmatic details, and University strategic goals.
    - i. If "NoGo", VCR informs inventor, with formal notification of release of Montana Tech's claim on IP related to invention. Inventor may proceed to patent, according to applicable MUS policies. This communication is recorded and maintained by the Patent Manager.
    - ii. If "Go", VCR informs Patent Manger to proceed in next steps.

- d. Patent manager files provisional patent application at US Patent Office, overseen by the Director of OSP. Patent manager logs date provisional patent application is filed, and informs VCR of successful filing. VCR informs Inventor of filing. (T2, in attached spreadsheet). [8 month alert is set.]
  - e. During this time: Inventor continues to work on research related to disclosure, strengthening application for non-provisional.
3. Conversion of Provisional Patents to Non-Provisional
    - a. Inventor continues to work on research and strengthen claim. Inventor may opt to respond to, or solicit, feedback from the patent committee. Inventor may make public disclosures once provisional patent is filed.
    - b. After 8 months of filing of provisional patent ("T2"), patent manager sends VCR an alert of upcoming deadline.
    - c. VCR requests any updates from inventor on invention disclosure form, and forwards these updates to Patent Committee Chair, cc'ing the Patent Manager. Typically, updates are requested from inventor with one-week deadline.
    - d. Committee Chair convenes committee to provide recommendation to VCR on filing of non-provisional patent, within one month. Patent Manager provides any requested documentation to Committee Chair, for their deliberations.
    - e. After 9 months after filing of provisional ("T2"), committee provides recommendation to VCR as to whether to proceed with non-provisional patent. (See committee charge.)
      - i. If "NoGo", VCR sends notification of release of IP to inventor, as noted above.
      - ii. If "Go", VCR works with Patent Manager to select patent attorney from approved list, based on areas of specialty of the lawyer. Date of notification of the lawyer is logged by patent manager.
    - f. Within 12 months of provisional filing, lawyer files non-provisional patent application. Date of filing is logged by patent manager.

Additional responsibilities and schedule:

- Annual basis (based on patent filing date) patent manager reports patent to necessary federal systems (e.g. iEdison).
- Semi-annual basis: Patent manager provides report to VCR on patents filed, including:
  - Provisional patents filed, and expiration
  - Pending non-provisional filings
  - Total spending on patents for the year

Responsibilities of involved parties:

1. VCR responsibilities include the following:

- a. Maintains content/structure of [invention disclosure form](#).
  - b. Educate faculty on patent process and technology transfer.
  - c. Structure patent tracking sheet, and share with patent manager.
  - d. Selects patent committee; writes charge to patent committee
  - e. Final decision on non-provisional patent funding
  - f. Approves / disapproves approved Montana Tech lawyers
2. Director of Sponsored Programs
    - a. Ensures required reports are filed to sponsors on provisional and non-provisional patents. May delegate this to the Patent Manager.
    - b. Oversees patent manager, including identifying training on uploading provisional patents and necessary patent reporting
3. Patent manager
    - a. Tracks and documents invention disclosures, provisional patents, non-provisional patents, release of IP to inventor (if applicable)
    - b. Sends alerts to involved parties when a next step is needed in the patent process
    - c. Manages payment and invoices involving patents, including provisional filings and non-provisional lawyer fees
    - d. Maintains all records on correspondence of patents
    - e. Maintains lists of approved lawyers, and shares with VCR
    - f. Provides semi-annual report on patents to RO/VCR
4. Patent Committee Chair
    - a. Follows Committee Charge, i.e. convenes patent committee, reports committee decisions, makes recommendations to VCR on patent filings.