

Succeeding with Proposals and Sponsored Projects



Part I: PI Training, including COI Part II: Responsible Conduct of Research

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Joanne Lee
Beverly Hartline
August 23, 2018

This session satisfies the Board of Regents and Montana Tech requirements for PI Training



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Introductions



- **Research Office personnel: MUS 211**
 - Bev Hartline, Vice Chancellor for Research (VCR)
 - Trisha Southergill, Grant support manager & E-Thesis Liaison
 - Paige Payne, Executive Assistant to VCR: x4102
- **Office of Sponsored Programs (OSP): MUS**
 - Joanne Lee, Director OSP
 - Lisa Zuech, Assistant director
 - Tyna Wright, Accounts payable accountant
- **Email address always monitored: grants@mtech.edu**



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Part I: PI Training



- **Required prior to seeking or directing any externally funded project, work, or activity**
 - Affects grants and contracts; not gifts
- **Acronyms, Roles, & Responsibilities**
 - Bev Hartline, Vice Chancellor for Research
- **Research Office & Pre-Award Process**
 - Trisha Southergill, Grant Support & E-Thesis Manager
- **Office of Sponsored Programs: Budgets & Post-Award**
 - Joanne Lee, Director of Sponsored Programs
- **Conflict of Interest Policy & Procedures**
 - Bev Hartline



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Gift or Grant/Contract?



- Does the sponsor require a deliverable or report?
- Will anyone (student, staff, faculty, consultant) be **paid for work?**
- Does the sponsor require a financial report detailing how the money was used?
- Is the sponsor a government agency?
- If the answer to **ANY question** is **Yes**, then the money is not a gift.
 - Gifts are administered by the Montana Tech Foundation
 - Grants/contracts are administered by OSP and RO and are the subject of PI training



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Gift versus Grant/Contract?



- **Grants/contracts are administered by OSP and RO**
 - Rigorous fiscal control and record-keeping
 - Meticulous after-the-fact time and effort reporting
 - Include indirect costs and fringe benefits (if anyone is paid)
 - Budget **MUST** be reviewed and approved by OSP *in advance*
 - Invoices and technical reports are provided
 - Covered by PI training
- **Gifts are administered by the MTech Foundation**
 - Considerable flexibility in use of funds, within intent of donor
 - No deliverables, payroll costs, or subcontracts.
 - Foundation will provide gift acknowledgement to the sponsor
 - It is good practice for the benefiting department, faculty, and student(s) to thank the donor, too



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Sales/Service vs Grant/Contract?



- **Sales/Service mechanism is sometimes used to provide research or analytical services to “public”**
 - Limited intellectual interpretation or scholarly expertise
 - Never for a state or federal agency or in response to a published request for quote/bid
 - No financial reporting requirements
 - Generally a small job (<~\$8 K) over a short period of time
 - Never requires AOR signature
 - Client usually requests services & owns samples, data, results
- **Establishment of sales/service index requires approval of VCR and VC Administration & Finance**
- **Prices must be published, recover full cost of the work (including IDCs), and NOT undercut private sector**



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Acronyms, Roles, & Responsibilities



Bev Hartline
bhartline@mtech.edu
 496-4456
 or through Research Office &
 Paige Payne ppayne@mtech.edu
 496-4102
 Location: Museum Bldg: 211



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Common Acronyms



- AOR – Authorized Organization Representative. The VCR is AOR.
- AY – Academic year (August 16 through May 15)
- BAA – Broad Area Announcement
- CFDA/FOA – Catalog of Federal Assistance/Funding Opportunity Announcement
- COI – Conflict of Interest
- DUNS, FEIN, EIN, TIN, CAGE – various institutional ID numbers for grant seeking
- ES&H – Environment, safety, and health
- F&A – Facilities & Administrative costs; same as IDC
- FY – Fiscal Year: Montana is July 1 thru June 30; Federal is Oct. 1 thru Sept. 30
- IDC – Indirect Costs; Officially called F&A – Facilities & Administrative costs
- IRB – Institutional Review Board for human subjects research
- MBMG – Montana Bureau of Mines & Geology
- NDA – Non-disclosure agreement. Used by private sector to protect IP discussed with us.
- OSP – Office of Sponsored Programs
- PI/Co-PI – Principal Investigator/Co-Principal Investigator
- PCF – Proposal Certification Form
- RFP – Request for Proposal
- RO – Research Office
- T&E – Time and Effort
- VCR – Vice Chancellor for Research, is AOR



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Roles and Responsibilities



- **Principal Investigator (PI) & co-PIs**
- **Organizational Unit: department head; dean; director**
- **Research Office (RO)**
- **Office of Sponsored Programs (OSP)**
- **Authorized Organization Representative is NOT you.**
 - It is the Vice Chancellor for Research (VCR)
 - Official who signs grants, NDAs, contracts, funding agreements, etc. on behalf of Montana Tech
 - Designated alternates in RO and OSP have AOR authorities for e-portal submissions



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Principal Investigator (PI)



- **Responsible for overall development, drafting, and coordination of the proposal, in accordance with Montana Tech's policies and sponsor's guidelines**
 - Includes cultivating and coordinating with partners and co-PIs, if any
 - Includes communicating with sponsor, if appropriate
 - Includes preparing or collecting narrative, summary, budget, and required attachments (bios, support letters, etc.)
 - Includes **EARLY** communication within Montana Tech & obtaining approval of Department Head, Dean, OSP, RO, and others
- **If funded, PI is responsible for conducting project in accordance with laws, regulations, Montana Tech's policies, sponsor's requirements, & grant's terms.**
- **PI should NOT interact with sponsor's administrative or financial personnel. Leave that to RO/OSP!**



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Department Head and Dean



- **Responsible for reviewing and approving concept and proposal**
 - Including any commitment of resources
 - Including release time, space, etc.
 - Including required or volunteered "match" or cost-sharing from any budgets within their purview
- **It is a good idea to notify and involve Department Head(s) and Dean(s) early in your proposal development (*no surprises*)**
 - Department Head(s) and Dean(s) for all PIs and co-PIs need to be informed and supportive
- **For administrative staff, your supervisor, director, and Vice Chancellor fulfill these responsibilities**
- **For MBMG they are group leader and MBMG director**



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Research Office (RO)



- **Assists with finding funding opportunities, developing competitive proposals, & provides non-financial compliance and oversight**
 - Helps PIs and co-PIs register with the sponsor, if required
 - Resolves conflicts, if too many PIs are interested in one competition
 - Ensures proposals comply with campus & sponsor non-financial requirements
 - Assists with proposal development: **Trisha & Bev**
- **VCR is Montana Tech's Authorized Official**
 - Available to review draft and help improve proposal success
 - Final internal approval of proposal submission and any matching
 - Authorized official and signatory for grants, contracts, memoranda of understanding, price quotes, and agreements under which any work for sponsor or partner would be completed
- **If you want help, we need material far in advance of deadline**



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Office of Sponsored Programs



- **Pre-award assistance with budget preparation and review**
 - Assists with and verifies match availability, if required
 - Provides final budget approval for proposals
- **Post-award financial accounting, compliance, & oversight**
 - Establishes grant budgets (“Banner number,” etc)
 - Assists PI with grant financial management and administration
 - Assists with and maintains files of Time & Effort (T&E) reports
 - Prepares sub-awards
 - Prepares grant accounting & financial reports for PI, RO, & sponsor
 - Processes faculty release time, GRA appointments, tuition payments
- **Administers indirect cost rate agreement**



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Research Office Support



- **Sends out notices of some funding opportunities**
 - Faculty & MBMG researcher e-mail list
 - *Let us know YOUR research/funding interests*
- **Updates campus on administrative regulations**
- **Serves as a resource for institutional information**
 - DUNS, FEIN, TIN, CAGE etc.
- **Helps complete standard reporting forms required by many Federal and State agencies**
- **Assists with electronic submission process**
- **Coordinates and offers grant-related training**



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Additional Resources



- **Research Office**
 - Grant-writing support, such as help with organizing teams for large or complicated proposals, reviewing and editing proposal draft(s)
 - Project design assistance: concept, content, & strategy
 - Project management and evaluation expertise or referrals
 - Compliance with and support for human subjects requirements, responsible conduct of research, intellectual property, conflict of interest, other non-financial aspects
- **Environment, Health, & Safety: x4463; Marissa Morgan**
- **Human Subjects Research: Scott Risser x4845**
- **Other administrative and support offices**
 - Assist with personnel, procurement, facilities, and other services in the same way they do for non-grant activities



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Safety is Paramount!



- **Montana Tech must be proactive to enable and assure the personal safety and well being of students, faculty, staff, visitors, and neighbors.**
- **We are also committed to protecting the environment.**
- **Proposals describe potentially new and unusual projects and activities.**
- **Your proposal must be reviewed by EH&S if it involves any of the following:**
 - Radioactive, biohazardous, or hazardous materials/chemicals
 - Nanomaterials, bloodborne pathogens, or recombinant DNA
 - The generation of any waste other than standard office wastes



When Do I Need to Talk to EH&S?



- **At the very beginning of the proposal planning**
 - What are you planning to do?
 - **Will project be generating hazardous waste:**
 - Include a line item in the budget for disposal
 - Determine if there are ways to minimize, “de-toxify” or “neutralize” the hazardous waste so it is no longer hazardous
 - **If you will be using hazardous materials or doing hazardous procedures**
- **Before starting other field and laboratory research projects, even if they are not externally funded**



Safety for Student Researchers



- **PIs are responsible for ensuring students are thoroughly trained on safety aspects of the project.**
 - Training, training and more training can be provided by advisor/PI, EH&S or both
 - Some topics require training by EH&S – nanomaterials for example
 - **Document** any EH&S training.
- **Involve EH&S early in reviewing safety aspects of senior thesis research and graduate student research.**
 - Key graduate student forms must be signed by EH&S: Program sheet, Lab check-out/hazardous waste check-out, & Final check-out list



Responsibility/Liability



- **As a PI, you are responsible for everything that happens in your lab or under your supervision**
- **UCLA accident**
 - UCLA chemistry professor Patrick Harran stood trial on felony charges stemming from a laboratory fire that killed staff research assistant “Sheri” Sangji a few years ago.
 - Training was not documented.
 - Los Angeles Superior Court Judge Lisa Lench denied a defense motion to dismiss the case, which is believed to be the first such prosecution involving a U.S. academic lab accident.
 - Harran was charged with willfully violating state occupational health and safety codes and faced up to 4 1/2 years in prison if convicted.
 - Ended with \$10,000 fine, 800 hours of community service, and being required to run a lab free of safety violations.



Important EH&S Contacts



- **Marissa Morgan**
 - With questions or for EH&S expertise
 - x4463, mmorgan@mtech.edu; 406-496-4463
 - Office location: CBB-003
 - EH&S web site: https://www.mtech.edu/env_health_safety/
- **Montana Tech Campus Security (24 hrs/day)**
 - (406) 496-4357; from campus phones: x4357 (“HELP”).
- **For emergencies off campus: 9-1-1.**
- **For non-emergencies off campus: (406) 497-1120**
- **St. James Hospital: 400 South Clark Street; (406) 723-2500.**






Research Office (RO) and Pre-Award

Research Office: 496-4102

Trisha Southergill
psouthergill@mtech.edu, 496-4727
 or
grants@mtech.edu




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Here to Help!


- **Please contact RO when you first become aware of a funding opportunity:** grants@mtech.edu or x4727
- **We can help:**
 - Determine the correct mechanism for submitting the proposal
 - Assist with completing standard forms
 - Provide helpful reviews, suggestions for improving funding chances
 - Coordinate internally, if we are limited in the number of proposals
- **Please contact OSP early**
 - Help with budget planning and approval
- **Alert department head, director, and dean early**
- **Submit PCF and near-final draft COMPLETE proposal to OSP/RO AT LEAST 7 days before deadline.**
- **Plan to submit to sponsor at least one day early!**




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Pre-Award Process Overview



PI



OSP




RO

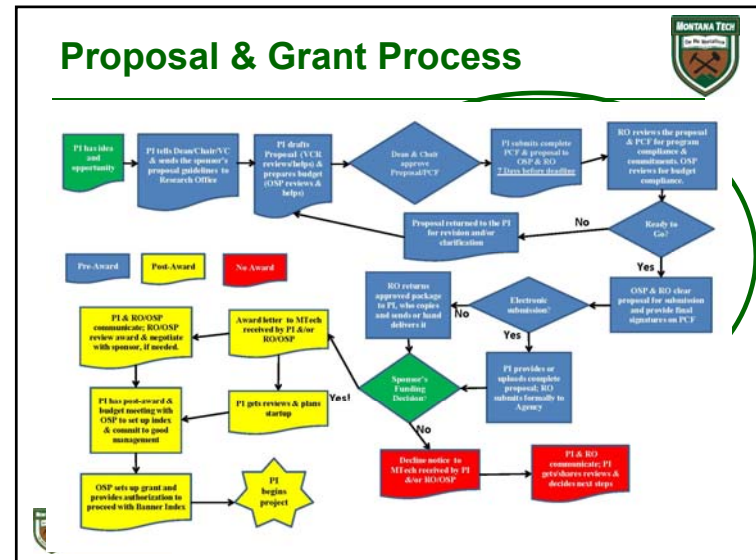
- Recognizes Funding Opportunity
- Alerts department head, dean, RO early of intent to submit
- Downloads grant package (if applicable)
- Reviews CFDA/FOA for requirements
- Completes PCF and obtains required approvals
- Submits PCF and supporting documents to **RO >7 days early**

- Assists PI with budget development
- Approves final budget

- Provides PI with support to complete application
- Completes standard federal forms (SLL & SF 424)
- Checks PCF for required signatures and approvals
- Reviews proposal for quality & compliance with requirements



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How to Prepare & Submit Your Proposal Successfully



- **Notify department head, dean, RO early of intent to prepare & submit**
 - To notify RO, use grants@mtech.edu, x4727, or visit office
 - Request or coordinate any desired assistance with Trisha Southergill
- **Submit near-final and complete information to RO at least 7 days before sponsor deadline**
 - Proposal Certification Form (PCF) completed and signed
 - Proposal guidelines/instructions, e.g. CFDA, FOA, RFP
 - Project abstract and narrative project description
 - Budget and budget narrative
- **RO will assign a person to work with you on the final review and submission steps**



What Will RO Do With Proposal?



- **Coordinate budget review with OSP**
- **Coordinate Montana Tech final approvals**
- **Read near-final draft and compare it with the requirements of the solicitation or announcement**
 - Work with you to finalize the proposal and ensure it is complete, clear, includes all sponsor forms, & complies with requirements
- **Coordinate proposal submission, including AOR approval**
- **Retain proposal files, track outcomes, and help expedite project setup (e.g. a Banner index and permission to start), if proposal is funded**



The Proposal Certification Form



- **Proposal Certification Form (PCF)**
 - Available online: www.mtech.edu/research/
 - Provides general information about project and funding opportunity
 - Ensures special requirements are understood and committed to by the PI and co-PIs
 - Documents the approval & support of: department, dean, OSP, RO
- **Required to accompany all proposals to RO/OSP**
 - Initiates final internal review of near-final draft proposal
 - Confirms proposal is approved for submission from Montana Tech
 - Triggers recording and tracking
- **Internal deadline for PCF & Proposal submission to RO/OSP is AT LEAST 7 days PRIOR to agency deadline.**



Proposal Certification Form




Budget Form and Cost Share Form



| Budget Item | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Subtotal |
|-------------|--------|--------|--------|--------|--------|----------|
| Equipment | | | | | | |
| Books | | | | | | |
| Supplies | | | | | | |
| Travel | | | | | | |
| Personnel | | | | | | |
| Materials | | | | | | |
| Indirect | | | | | | |
| Other | | | | | | |
| Total | | | | | | |

Montana Tech Cost Share Agreement Form

Project Name: _____ PI: _____

Project Start: _____ Project Number: _____

| Employee Name or Title | % Time | State Personnel Expenses | Fringe Benefits or Other | University Authorized Signature and Date |
|------------------------|--------|--------------------------|--------------------------|--|
| | | | | |
| | | | | |
| | | | | |

| Employee Name | % Time | State Personnel Expenses | Fringe Benefits or Other | College Authorized Signature and Date |
|---------------|--------|--------------------------|--------------------------|---------------------------------------|
| | | | | |
| | | | | |

Total Expenses: \$ _____

Total State Personnel Expenses: \$ _____

Total Fringe Benefits: \$ _____

Total Other: \$ _____



Other Required Approvals



- Scott Risser (IRB Rep), if project uses human subjects
- Marissa Morgan, if project has EH&S aspects
- Doug Evans—Facilities Director, if facilities changes needed
- Research Office can supply institutional compliance verification and/or documents, required by Federal and many State agencies
 - Responsible Conduct of Research Training
 - Anti-Lobbying
 - Non-Discrimination
 - Negotiated Indirect Cost (F&A) rate document (also on web site)
- Authorized Organizational Representative (AOR) involvement is required to submit a proposal to any agency or private sponsor
 - Beverly Hartline is Montana Tech's AOR
 - Alternate/back-up AORs fill in, if she is not available



Submitting Your Proposal



- Know how the proposal is to be submitted: hard copy (how many?) or electronically (what portal)?
- Provide the RO with a copy of the CFDA/FOA, BAA, RFP, if any, in advance
- Know the deadline and PLAN your work AND THE INTERNAL REVIEW PROCESS to submit **early**
 - E-Portals are often busy and slow as deadlines approach
 - Plan to be ready to submit no later than the day before the deadline
 - Proposals submitted early are always better and more likely to be funded than those struggling to make the last minute deadline
- Grants.gov is the common e-portal for 26 Federal agencies
- FastLane is the preferred e-portal for NSF submissions



Submitting a Grants.gov Proposal



- Common e-portal for many Federal agencies
- Supports ~1,000 grant programs awarding ~\$500 B per year
- Montana Tech is registered with SAM.gov & has a DUNS number
- New Grants.gov submission process:
 - Grants.gov uses **workspace** submittal portal.
 - All grants.gov submissions are submitted via **workspace**.
 - The RO will create and complete the application forms for you in **workspace** and the PI will provide the required proposal attachments as required by the program guidelines (i.e. project summary, project narrative, key personnel bios, support letters, etc.)
- Grants.gov gets busy near deadlines, so plan to submit early!!! Late proposals are automatically returned without review.



Submitting NIH or NSF Proposals



- **National Institutes of Health (NIH)**
 - Requires proposal submission through ASSIST (NIH submission portal within ERA Commons)
 - Uses ERA Commons to support proposal review and administration
 - PIs and co-PIs must register with ERA Commons (see RO)
- **National Science Foundation: Research.gov**
 - PIs and co-PIs register with research.gov and request affiliation with MTech. If previously registered with Fastlane – the username transferred to research.gov
 - PI prepares all pieces of the proposal and uploads them into research.gov. PDF or Word formats are accepted and converted. Recommend uploading PDFs.
 - In research.gov, the PI can authorize review and submission by RO.
 - Proposal **MUST** be submitted officially by RO. But RO **CANNOT** submit until the proposal is released for review/edit/submit by PI.
 - Final submission by RO must occur before 5 pm Montana time on deadline date, or proposal is late and will be returned without review.
 - Plan ahead and coordinate closely with RO!



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US Department of Energy & Others



- **Department of Energy**
 - FedConnect, EERE eXchange, or DOE eXchange depending on the opportunity
 - Grants.gov for unsolicited proposals (sometimes ‘white paper’ first)
 - Read the FOA carefully for submittal instructions
 - Final submission by RO/AOR
- **State Agencies**
 - Find out and inform RO about the specific requirements and submission process for your proposal
 - In many cases, requires delivery of paper copies: PI’s responsibility
- **Full internal approval & PCF (Department, Dean, OSP, RO) MUST be complete before the proposal leaves campus!**
- **Don’t wait to the last minute, hour, or day! Plan ahead!**



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Collaborative Proposals



- **When Montana Tech is Lead Institution**
 - May require coordination/approval of other institution’s RO/OSP
 - We require partner’s proposal pieces and budget and ours, along with PCF **7 days before sponsor’s deadline**
- **When Partner is Lead Institution**
 - Frequently their internal deadline (like ours) is a week or more before the sponsor’s due date, and all our info must be in their hands
 - PCF and internal review are required **ONLY** for our part(s), **5 days** in advance of the internal deadline of the partner!
 - OSP must review and approve our sub-budget in advance
 - Please provide RO with e-copy of the **full** proposal after submission
- **With NSF collaborative proposals, the collaborating institutions are equal partners and each submits a coordinated and “linked” proposal**
- **Arrange for needed commitment and support letters early!**



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Research Office Information



- **Website: www.mtech.edu/research/**
 - Announcements, policies, links to funding opportunities, current forms and instructions
 - Also includes negotiated F&A (IDC) agreement
- **<https://www.mtech.edu/research/sponsored-programs/policies-forms/index.html>**
 - PI Handbook
 - Policies
 - Procedures
 - Forms




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**Office of
Sponsored Programs: Budget
Development & Post-Award**

Joanne Lee
jlee@mtech.edu
 496-4769 (OSP)
 2nd Floor Museum Building




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Developing Your Proposal Budget

- **Proposal budgets must be developed in accordance with Montana Tech’s policies and rates and sponsor’s requirements**
 - Salaries (most faculty have 2 positions—academic and research—with different salaries)
 - Benefits
 - Travel, tuition, equipment, supplies, materials, subcontracts, etc.
 - Facilities and Administrative (F&A) costs (aka “Indirect Costs”)
- **Montana Tech’s policy is to apply its full approved F&A rate, unless a lower amount is the maximum allowed by the sponsor**
- **If sponsor requires a “match,” see OSP & RO early**




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Montana Tech’s Rates

- **Montana Tech’s federally negotiated F&A rate is 33.5% of Modified Total Direct Costs (MTDC)**
 - MTDC includes all expenses, except: participant costs, tuition, equipment costing more than \$5,000, and the cost above \$25,000 in any one subcontract
 - Per Board of Regents policy, F&A rate for MT state agencies is 25%
- **Salaries can be budgeted at the approved research position rate or academic position rate**
- **Benefits are estimated using average rates**
 - **Faculty** **35% Acad. Yr; 25% Summer**
 - **12-Month Professional** **46%**
 - **Classified Staff** **57%**
 - **Students** **3% Acad. Yr; 10% Summer**
- **Rates are subject to change**




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“Match” or Cost Share

- **“Match” or cost share is the portion of the total cost of the project not covered by the sponsor**
- **Match or cost share can be mandatory or voluntary**
 - Montana Tech generally does not volunteer a match
- **Sources of funding can be real dollars or “in-kind” from Montana Tech or third parties**
- **Match or cost share of ANY type or amount must be approved by OSP and VCR in advance**
- **Mandatory or voluntary cost share MUST be documented as the project proceeds, and the documentation must be available for review or audit**



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Cost Share/Match Requirements



- **The expense must be:**
 - Allowable according to the terms of the project,
 - Allocable to the specific project, and
 - Documentable through the recipient's accounting system
- **The funding source CANNOT be other projects funded by the same or a related sponsor**
 - No federal funds can be used to match federally funded projects
 - In most cases, this restriction also applies to pass-throughs
- **In-kind matches cannot have been used previously or concurrently as match for other projects**

Montana Tech rarely approves cost sharing, unless required by the sponsor



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Time and Effort (T&E) Reporting



- **Federal agencies require “after the fact” documentation of time and effort supported on each project**
 - Certifies that the work paid for was done AND was for the project
 - Provides evidence that salaries charged to a sponsored project are reasonable in relation to the work performed
 - Reflects all the activities covered by the person's University compensation
 - **Any effort/pay not documented and certified can be disallowed by the sponsor as a "false claim"**
 - Certification is done by the PI with direct knowledge of the work
 - Requires appropriate backup documentation that confirms T&E
- When certifying, use your initials and signature ... not those of the person for whom you are certifying***



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Requirements for Sub-Awards



- **A sub-award is the method used to send funds from the grant to another non-profit entity (usually a university), which was specified in the proposal as a partner in the project**
- **A sub-award is similar to a sub-contract, and requires certain paperwork be submitted to OSP**
- **Sub-awardee must provide detailed financial reports to us, for inclusion in our financial reports to sponsor**
- **Sub-awards are subject to annual audit**
- **For more information, contact OSP early**

All necessary forms need to be signed and submitted to OSP prior to execution of sub-award



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Post-Submission Modifications



- **DO NOT make post-submission modifications to a proposal, prior to an award decision by sponsor**
 - May disqualify the proposal as "late"
- **Who should be involved in modifications after sponsor decides to make an award?**
 - Changes to Scope of Work or responses to questions
 - Principal Investigator/Project Director AND RO
 - Financial/Contractual
 - Office of Sponsored Programs AND RO
 - Matching/reinvestment and review/assistance with questions or scope modifications, final review, and approval
 - Research Office
- **Note: if the sponsor changes your budget, this change should result in change in scope/schedule, too**
 - Revised scope must be incorporated into the final award




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Congratulations!

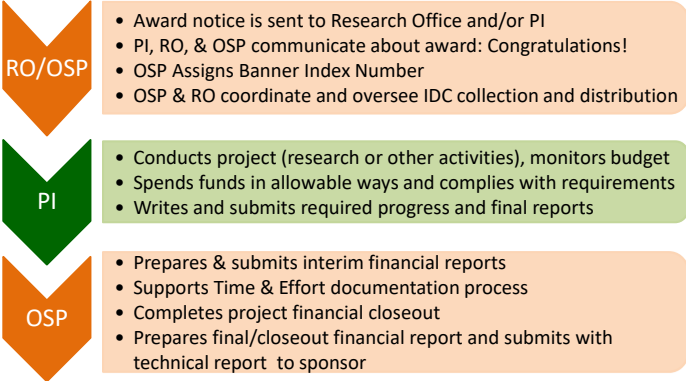
Your proposal is being funded!




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Post-Award Process Overview



- RO/OSP**
 - Award notice is sent to Research Office and/or PI
 - PI, RO, & OSP communicate about award: Congratulations!
 - OSP Assigns Banner Index Number
 - OSP & RO coordinate and oversee IDC collection and distribution
- PI**
 - Conducts project (research or other activities), monitors budget
 - Spends funds in allowable ways and complies with requirements
 - Writes and submits required progress and final reports
- OSP**
 - Prepares & submits interim financial reports
 - Supports Time & Effort documentation process
 - Completes project financial closeout
 - Prepares final/closeout financial report and submits with technical report to sponsor




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Completion of Award Process

- Award notices MUST be sent to the Research Office**
 - If the PI receives formal or informal award notification, please alert RO as soon as possible: forward to grants@mtech.edu
 - RO sends proposed contract/agreement to PI & OSP for review
 - Approved contract is signed by the AOR
 - Contract is then transferred to OSP for post-award financial management
- PI, OSP, & RO review the award document**
 - Details of Budget and Scope of Work
 - Policies, guidelines and reporting requirements
 - Subcontracts are issued, if necessary
 - PI and co-PIs should read the award document so they understand all requirements




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What to do if Proposal is Declined

- Obtain and study any reviews, if available**
 - If desired, share reviews with VCR and meet for "post mortem"
 - If no reviews, contact sponsor to request any feedback
 - Don't be too pushy
 - Don't argue about the feedback or decision, just accept it
- Start working on remedying any weaknesses, to have a more competitive proposal in the future**
 - Preliminary data?
 - Background research/current state-of-the-art
 - Publish YOUR prior work**, so you have a track record
 - Find collaborators who have needed expertise that you are missing
 - Improve clarity of proposal



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Conflict of Interest

Bev Hartline
bhartline@mtech.edu
 496-4456
 Or through Research Office
 496-4102




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Do You Trust This Research?

- A university professor testified at an environmental impact hearing that a proposed chemical facility producing toxic gases would have no negative impact on the surrounding community
- The company claimed that the dangers to the community were very slight because of the safety measures they planned to take
- The company quoted the results of a detailed engineering analysis carried out by the professor's graduate students
- The research had been supported with funding from a federal grant and from the company
- At the hearing, neither the company nor the professor said who supported the research

➤ Do you trust this research? Why or why not?




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What is a Conflict of Interest?

- A situation where one's professional actions, statements, or decisions could be influenced by considerations of personal or financial gain
- Montana law (Title 2, Chapter 2) defines COI as
 - Disclosing or using confidential information to further your personal financial gain
 - Accepting gifts or bribes
 - Using public time, facilities, equipment, supplies, personnel, or funds for private business purposes
 - Holding ownership in a business that does business with Montana Tech *and* being in a position to make or influence the purchasing decision

➤ A conflict exists for you if it involves your spouse, parents, children, others who live with you...




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Types of Conflict of Interest

- **Financial:** potential for personal or family financial gain
 - Threshold: \$5,000
- **Scientific:** interests that could interfere with objective peer judgment of competitor's research results or proposals.
- **Academic:** use of university resources for personal gain or interest in university-generated intellectual property.
- **Nepotism:** being in a position to influence hiring, pay, grades, or success of a close relative
- **Conflict of Commitment:** potential for another obligation to encroach on time needed to fulfill Montana Tech duties

Adapted from UM



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What is Not Considered a Conflict ?



- Montana Tech salary
- Income from seminars or lectures sponsored by nonprofit entities or from service on advisory committees for public or nonprofit entities
- Travel reimbursed or paid by a university or non-profit entity to enable you to advise or give seminar
- Income from a related business entity ≤\$5,000
- Consulting income totally unrelated to the expertise you use at Montana Tech
 - Note: any consulting or outside work MUST be approved in advance by the department head, dean, VCR, and Chancellor
- Equity holdings in *publicly-traded companies* ≤\$5,000

Adapted from UM



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Faculty Consulting



- Since faculty members are responsible for teaching, research, and service, Board of Regents Policy 401.1 allows and encourages faculty to consult.
- Montana Tech's *Faculty/Staff Handbook* describes Montana Tech's rules for faculty consulting.
 - All consulting MUST be approved in advance by the department head, dean, VCR, Provost, and Chancellor (form in Appendix E)
 - A separate form is needed for each consulting client
 - Form must be updated annually or more often if situation changes
 - Teaching and other campus obligations cannot suffer
 - Use of Montana Tech resources or facilities is inappropriate OR must be covered by an agreement with the company & be reimbursed
 - Total amount of consulting cannot exceed 20% time during AY.
 - Summer: no limit, unless faculty member teaches or is grant-funded



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Protecting MTech and YOU from COI Issues



- Actual conflicts are not tolerated, but they are rare
- Potential conflicts are common, but they can usually be managed effectively
- Disclosure is required of potential and actual conflicts: **annually by Sept. 30, or as they arise**
 - Management of potential conflicts is in everyone's best interest
- Board of Regents policy 770 requires each campus to have a COI policy and disclosures covering every employee.
 - Montana Tech's Policy is on the Research Office web site
 - It complies with the Public Health Service's stringent requirements



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Disclosure of Potential Conflicts




- **When**
 - Annually – due on or before Sept. 30th
 - During the year – whenever a new conflict arises
- **Evaluation and Disposition of Disclosures**
 - Submission to Research Office, copies signed by the employee's Dean, or Director, or the Vice Chancellor overseeing the employee's supervisory line.
 - Reviewed and dispositioned by VCR, with concurrence by all
- **Disposition options**
 - No Conflict
 - Waiver
 - Management of Conflict
 - Elimination of Conflict




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Development of the Conflict Management Plan




- **If conflict of interest is not waivable,**
 - Employee is welcome to draft a conflict management plan; or
 - VCR & employee (with UM legal counsel and supervisor as needed)
 - Develop a conflict management plan
 - Manage, reduce or eliminate the conflict of interest.
- **The plan shall:**
 - Employ any strategy that satisfactorily addresses the conflict
 - Be in writing and signed by all parties
 - Describe the conflict of interest
 - Describe the methods to be used to guard against bias, self-dealing, and inappropriate use of University resources




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SCENARIO




- **Employee's mother owns a company. Employee wishes to subcontract part of sponsored research work to mother's company.**
 - Is this a conflict?
 - Why/Why not?
 - Should the employee disclose it?
 - Does it create the appearance of a COI?
 - How could it be managed or eliminated?




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SCENARIO




- **Employee co-owns and is part of a small business.**
- **The business utilizes the same expertise that is involved in the employee's position at Montana Tech.**
 - Is this a conflict?
 - Why/Why not?
 - Should the employee disclose it?
 - Does it create the appearance of a COI?
 - How can it be managed or eliminated?
- **Suppose the employee is in a position to direct work, either to the business or to Montana Tech?**
- **Suppose the business is in an entirely different field?**




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SCENARIO



- **Researcher is looking for a contractor to provide specific custom high-tech parts.**
- **Researcher is a consultant to Company A, which has the capability to provide the parts.**
- **Researcher authorizes using a "sole source" contract to place the contract with Company A, using a price quote provided by the Company**
 - Is this a conflict?
 - Why/Why not?
 - Should the Researcher disclose it?
 - Does it create the appearance of a COI?
 - What if the Researcher had a conflict management plan, where he agreed never to make decisions for Montana Tech where Company A could be selected?



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Questions?



- **Thank you for participating**
- **We are available to help you win grants and manage them successfully**
 - Museum Building, Second Floor
 - Historic but not ADA-compliant “accessible” space
 - We can meet you in accessible space
- **Together we can increase Montana Tech’s grant portfolio and the funding available**
 - To perform important projects and develop your reputation
 - To provide even better educational experiences for our students
 - To provide better service and value to Montana and our communities



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Part II: Responsible Conduct of Research (RCR) or Performing Research Responsibly

Bev Hartline

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Responsible Conduct of Research



- **Responsible Conduct of Research**
- **Other research-integrity topics**
 - Research using human subjects
 - Research using animals
 - Data management practices
 - Mentor and trainee responsibilities
 - Collaborative research
 - Authorship, publication
 - Peer review



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Responsibilities of Mentors



- **As a mentor of student research, you are responsible for ensuring your students understand how to perform research ethically, safely, and responsibly**
 - Students doing research at MTech must have documented RCR training.
 - This requirement applies, whether the research is sponsored or not.
 - We can provide RCR training for classes or programs.
 - Grad Student RCR: August 24 @ ~9:15 am; Big Butte
 - Also: two sessions TBD during first 3 weeks of class



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Research and Creative Scholarship



- **Research and creative scholarship involve**
 - Advancing knowledge: discoveries and theories
 - Applying knowledge: creating new technologies
 - Advancing research capacity: new tools or methods
 - Creating books, works of art, insights, interpretations, etc
- **The reliability and accuracy of research and other forms of creative scholarship require researchers to choose to do their work responsibly and with integrity**
- **Trust and trustworthiness are key expectations**



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“On Being a Scientist” NAS, 2009



The scientific enterprise is built on a foundation of trust. Society trusts that scientific research results are an honest and accurate reflection of a researcher’s work. Researchers equally trust that their colleagues have gathered data carefully, have used appropriate analytic and statistical techniques, have reported their results accurately, and have treated the work of other researchers with respect.

When the trust is misplaced and the professional standards of science are violated, researchers are not just personally affronted—they feel that the base of their profession has been undermined.

http://www.nap.edu/openbook.php?record_id=12192&page=R9

Everyone—especially established researchers—is responsible for upholding and promulgating high standards and for making sure that students and new researchers learn the values associated with ethical research conduct.



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Shared Values for Research



- **Honesty**: conveying information truthfully and honoring commitments
- **Accuracy**: reporting findings precisely and taking care to avoid error
- **Efficiency**: using resources wisely and avoiding waste
- **Objectivity**: letting the facts speak for themselves and avoiding improper bias
- **Respect**: protection of the well being of research subjects and disclosing and minimizing potential harm

Adapted from Steneck: [Introduction to the Responsible Conduct of Research](#), updated 2007



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Integrity is Vital to Research



- **Ethical practices are often taken for granted until something bad happens**
- **Researchers need a keen awareness of ethical issues and a proactive approach to research integrity**
 - Recordkeeping
 - Avoiding conflicts of interest
 - Sharing authorship appropriately
 - Giving credit for others’ ideas
 - Conducting peer review
- **When researchers uphold ethical best practices, they contribute to an accurate scientific record, public trust in science, and efficient use of research funds.**

Adapted from Sigma Xi



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Research “Rules of the Road”



- **How should you conduct your research?**
- **What practices should you follow?**
- **Who defines the research “rules of the road?”**
 - Professional societies: professional codes
 - Government regulations
 - Institutional policies
 - Individual values and convictions
- **Who enforces research “rules of the road?”**
 - Individual researchers and their colleagues
 - The institution
 - The government



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Research Misconduct Definition



- The Federal government defines research misconduct
“**fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results**”
- **Fabrication** is making up data or results
- **Falsification** is manipulating research materials, equipment, or processes or changing or omitting data or results so that the research is not accurately represented in the research record
- **Plagiarism** is using another person’s ideas, processes, results, or words without giving appropriate credit



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Misconduct at Bell Labs



- October 2002--Physicist’s groundbreaking electronics research at Bell Labs was based on fraudulent data.
- It was discovered that Dr. Jan Hendrik Schoen, a Bell Labs researcher, had made up or altered data at least 16 times between 1998 and 2001.
- Thirteen of Schoen's disputed findings had been published in *Science* and *Nature*. The experiments in question were in the areas of superconductivity, molecular crystals, and molecular electronics
- Schoen was fired by Bell Labs
- German PhD degree was rescinded in 2004



CITI RCR Training Module



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Other Examples?



- Including articles on your resume that are not yet published. Accepted and “in press” is OK, if so indicated.
- Carefully selecting only the data, measurements, or samples that will be most satisfying to the sponsor to include in a report.
- Purchasing items for personal or other use using grant funds.
- Intentionally and persistently collecting data using research instrumentation you know is not calibrated.
- Intentionally describing research methods inaccurately to deceive others.



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More Types of Research Misconduct



- **Obstructing an investigation of research misconduct**
 - Intentionally withholding or destroying evidence
 - Falsifying evidence
 - Retaliating or intimidating witnesses or potential witnesses
- **Misappropriating grant funds**
- **Noncompliance with research regulations**
 - Animal and human subject protections
 - Biohazard materials
- **Falsely accusing others of research misconduct**



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Criteria for Research Misconduct



- **To be considered research misconduct, actions must satisfy three criteria**
 - Represent a “significant departure from accepted practices”
 - Have been “committed intentionally, or knowingly, or recklessly”
 - Be “proven by a preponderance of evidence”
- **Misconduct does not include differences of opinion or honest errors**
- **Federal agencies require institutions and researchers who receive funding to assure research is conducted responsibly**



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Your Responsibilities



- **Always perform research responsibly and ethically**
 - Mentor students and encourage colleagues to do so, also
- **Report observed, suspected, or apparent misconduct to the Research Integrity Officer (RIO) = VC for Research**
 - Vice Chancellor must investigate, treat the accused person fairly, and ensure protection of the person who reported the possible misconduct
- **Not make malicious, joking, or intentionally false allegations of misconduct**
- **Montana Tech has a *Policy to Assure the Integrity of Research and Scholarly Activity* (2/15/2018)**
 - <https://www.mtech.edu/research/files/research-integrity-policy.pdf>
 - Along with linked procedures



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MTech Protects Whistleblowers



- **Your right to “blow the whistle” or report suspected misconduct is protected by the US Constitution, Federal Law, and State Law**
- **Speaking out is the right thing to do – whenever anything inappropriate is happening**
 - Suspected research or scientific misconduct
 - Suspected fiscal misconduct or mismanagement
 - Deliberate or continuous violation of state or federal regulations, Montana Tech policies, safety or environmental standards
 - You are expected to help insure the integrity of research at Montana Tech
- **Any retaliation is not allowed and must be dealt with swiftly by Montana Tech**



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Other Research Integrity Topics



- Research using human subjects
- Research using animals
- Protection of environment, health, and safety
- Data management practices
- Mentor and trainee responsibilities
- Collaborative research
- Authorship and publication



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Human Subjects Protection



- Human subjects research is any research, in which the subjects are living human beings.
- Human subjects must be treated with respect, be informed of the risks and benefits of participation, be allowed to decide freely whether to participate, and be protected from harm.
- Human subjects research must be reviewed and approved by UM's Institutional Review Board (IRB) before it or its funding can start.
 - Scott Risser (Liberal Studies) is MTech's IRB member. X4845. He must review a funding proposal and sign off on the PCF.
 - Researchers and students must take NIH's on-line training or CITI on-line training (both available through UM's IRB web site)
 - Theses using human subjects cannot be accepted unless IRB approval was obtained in advance
 - Any protocol changes must be approved in ADVANCE
- **These requirements apply to ALL human subjects research, regardless of source of funding, and even if it has no funding.**



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Protection of Research Animals



- Federal law requires that research using live vertebrate animals be conducted in accordance with the highest scientific, humane, and ethical principles.
- There are stringent rules regarding the care and use of these animals for research.
- Montana Tech does not have the facilities or procedures to care for live vertebrate animals, so such research must be done in collaboration with an institution which has those capabilities.
- If you anticipate that your research needs these types of animals, please see the Research Office well ahead of time, so appropriate arrangements can be made.



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Protecting the Environment, Health & Safety



- Review and special procedures are required for all projects using hazardous chemicals, hazardous materials, involving hazardous activities, or potentially generating hazardous waste
 - Ionizing radiation, radioactive materials, biohazards
 - Nanomaterials, blood-borne pathogens, recombinant DNA
 - Waste generation (beyond normal office waste)
- It is critical to ensure health & safety of students, staff, & public: make sure students know how to do their research safely
- These aspects of research & proposals must be reviewed by Marissa Morgan x4463, mmorgan@mtech.edu. She must sign-off on the PCF



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Data Management Practices



- **Data management is key to the integrity and usefulness of research from planning to publication**
 - NSF requires a data management plan for each proposal
 - A data management plan template is available from Research Office
- **Grants and contract agreements often specify data requirements**
 - Government sponsors want research funded to be useful to society
 - New rules require data obtained using federal funds to be made publically available
 - Private industry wants research it funds to produce commercial economic benefits to the company, and may have confidentiality requirements
- **Montana Tech is responsible for data developed here and requires researchers to comply with the sponsor's requirements and to use care in recording and saving data: lab books, data files, etc.**



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Mentor & Trainee Responsibilities



- **Clear understanding of mutual responsibilities**
 - Time commitment and work schedule
 - Criteria for judging performance and letters of recommendation
 - Specific responsibilities for the research
 - Standard operating procedures, protocols, data recording, safety
 - Credit for the research and criteria for co-authorship
- **Commitment to a productive and supportive research environment, including the highest standards of integrity**
- **Proper supervision and review**
- **Mutual understanding that the purpose is to prepare mentee to become a successful researcher**
- **Respectful treatment**



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Collaborative Research



- **Clear up-front understanding and agreement on roles and responsibilities are essential**
 - How data will be collected, stored, and shared
 - How project will be managed and changes made
 - Criteria for authorship and authorship order
 - How publications will be prepared and approved
 - Who is responsible for which administrative requirements
 - Agreement on intellectual property rights and ownership
 - How collaboration will be managed/changed/ended



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Authorship and Publication



- **Publications should provide**
 - Full and fair description of the work undertaken: methods
 - Accurate report of the results: results
 - Honest and open assessment of the findings: discussion
- **Authorship should be reserved for and given to those who made significant contribution**
 - Intimately involved in conception and design of the research
 - Assumed responsibility for data collection and interpretation
 - Participated in drafting the publication, AND
 - Approved the final version
 - ***All authors should qualify, and all who qualify should be authors***
- **Order of author listing depends on field: alphabetical; or amount of contribution**
- **All work NOT original in the publication should be referenced!**



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Peer Review



- **Used to decide what projects to fund, what papers to publish, whom to hire and promote, which research is reliable, etc.**
- **Peer review assesses the quality and importance of proposed and published research.**
- **To be valuable, peer review must be:**
 - Timely and thorough
 - Constructive and honest
 - Objective and free from personal bias
 - Respectful of need for confidentiality, FOREVER
- **Manuscripts and proposals must be shredded, deleted, or returned after review is complete.**



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- Interactive video on research integrity: You play a role: <http://ori.hhs.gov/theIab>
- Priscilla Frase, Laura Barden, & Jeffrey Kovac, *Scientific Ethics for High School Students*, 1997 Institute for Chemical Education
- Goldfarb & Pritchard, *Ethics in the Science Classroom*, <http://www.onlineethics.org/File.aspx?id=33732> free PDF



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Questions?



- **Thank you for participating**
- **Your role in performing research and in mentoring sets an example for our students**
 - Please help Montana Tech students develop into responsible researchers
- **Performing research responsibly is vital to your reputation and to Montana Tech's**
- **Questions?**



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