APPENDIX I

Mentor Guidelines

I. Mentor Eligibility

Montana Tech faculty members, research faculty, and members of the Bureau of Mines and Geology are eligible to serve as mentors. It is expected that mentors will have some level of expertise in the student's chosen area of research or public health internship.

II. Connecting the Student Researcher and Mentor

There are many successful ways for pairing student researchers or research teams with a mentor. Mentors with an interest in sponsoring a URP are encouraged to recruit eligible students or student teams from their classes or other venues. If you want to cast a wider net, the URP committee (urp@mtech.edu) would be happy to help you brainstorm and recommend some of the many resources available.

A student or student team may have a research idea they wish to pursue, or they may know a researcher with whom they would like to work. Students are encouraged to solicit mentors for their projects.

Regardless of how the partnership is formed, the first task for the student researchers and mentors is to reach an agreement on the topic and scope for the URP. It is advised as a starting point that mentors review the latest URP guidelines and requirements with the student(s) they are intending to sponsor in order to clarify the commitments and responsibilities.

III. Proposal Preparation for URP or Academic Year PHI

Once a mentor and student have decided to work together on a URP or PHI, the mentor is asked to provide support for the student in the preparation of a proposal. The URP website contains resources on preparing a competitive proposal, including examples of previously funded projects. Creating the research or PHI proposal is primarily the responsibility of the student. However, the creation of a URP proposal is intended to be a learning process with close interaction between student(s) and mentor(s).

Some specific areas might demand additional support from the mentor during the proposal writing process, includes:

- For research that involves collaboration with external entities, serving as liaison in negotiating a letter of permission to be included with the proposal.
- Providing assistance in navigating the departmental processes for obtaining matching commitments for the project.
- Ensuring that the forms are complete, including initialing sections required of both the student and the mentor on the proposal cover sheet.
- If the project requires the use of human subjects, serving as the official PI and providing guidance in obtaining Institutional Review Board (IRB) approval, and acting as the point of contact to the IRB Coordinator, Scott Risser, Ext. 4845. More information on IRB requirements is available in Appendix H, IRB Approval.
- If potential safety concerns exist, seeking the advice of the Director of Environmental Health and Safety, as to whether the research project will require safety training for the student prior to commencement of the research.

IV. Research or Internship

With the mentor's guidance and supervision, students may begin their research as soon as they file the required scholarship paperwork. Two exceptions exist: (1) for projects involving human subjects, IRB approval is required; and (2) if health or safety issues have been identified, training needs to be completed prior to starting work. It is incumbent on the mentor to ensure that these requirements are satisfied before allowing the student to begin the research or PHI.

By accepting the URP/PHI award, the student researcher is committing to completing his or her research and presenting the results at the Montana Academy of Sciences (MAS) Annual Meeting, TECHXPO, or the SURF Poster Symposium. The mentor role is to:

- Meet regularly with the mentee to provide guidance and ensure that the student continues to make progress.
- For SURF, periodically approve time cards, certifying that the student is making adequate progress.
- Assign a final grade for each semester of the URP/PHI during the academic year.

The mentor might also be called upon to assist with completing expense and travel forms in accordance with the project's approved budget (see Travel Instructions on the Undergraduate Research website for more information).

V. Course Credits and Workload

All students receiving URP grants are required to enroll in either "xxxx 290 Undergraduate Research" (South Campus) or "xxxx 490 Undergraduate Research" (North Campus) for a minimum of 1 credit for any semester during which they are actively engaged in the project and expect to receive a scholarship.

It is the expectation at Montana Tech that a 1 credit hour class requires about 45 hours of effort over the semester.

To maintain a consistent experience and set of rewards for all the URP/PHI students, mentors are encouraged to estimate the time commitment required for success. For a project expected to take 100 hours over two semesters, a reasonable solution is to enroll the student in two one-credit URP sections over the academic year.

Larger projects could be deserving of a greater number of credit hours, up to a maximum of 3 credits per semester, with a total of 6 credits per project. However, it is assumed that faculty-student interaction and student engagement will increase accordingly. Student researchers are encouraged to submit a team URP proposal if the scope of the project is substantial enough to warrant a multi-student project.

VI. Presentation of Research Results

In advance of the MAS Annual Meeting in April, the mentor should guide the student in preparing a presentation. Abstracts are usually due to MAS the third week in March. The mentor is expected to attend the student's presentation at the MAS annual meeting and be prepared to ask pertinent questions and help answer questions from the audience, if required.

Mentors have an opportunity to add value to the URP by encouraging their students to present their results at other venues, both on and off campus, and by contributing to a peer-reviewed paper. Examples of such opportunities include the virtual National Conference on Undergraduate Research, Sigma Xi, and at conferences in their field of study. Mentors can help in this process by identifying possible funding sources to assist with travel expenses to these events. Note that

Research office will help with you find travel funding, if the student will be presenting. It is the responsibility of the Mentor to ensure that the presentation is successfully carried out by the student.

VII. Final Grade

The mentor is responsible for assigning and reporting a final grade for the student. With the exception of extraordinary circumstances, incomplete projects or failure to present at the MAS Annual Meeting should result in the student being assigned a grade of "F" for the respective URP section.

IIX. Mentor Allowances

Mentors are eligible to receive a $300 allowance per sponsored URP or RAMP project and a maximum of $1000 for SURF projects. Allowances will be granted on the condition that both students and mentors adhere to the proposal and presentation directives detailed in the URP Guidelines. Funds in these accounts must be used in support of research (supplies, travel, etc.). Allowances are normally distributed by the Office of Sponsored Programs before the end of the fiscal year. Each program has specific distribution restrictions.