

From: [Sarah Harling](#)
To: [Faculty Senate](#)
Cc: [Nancy Progar](#)
Subject: MME Signature Student Experience Proposal
Date: Monday, November 2, 2020 10:54:57 PM
Attachments: [Final Signature Student Proposal Worksheet-1.pdf](#)

Good evening,

Attached is a statement of interest and proposal for the Hot Shop in the Metallurgical and Materials Engineering Department. I hope you will consider allowing us to move on the workshop and discussion phase of the proposals.

Thank you in advance,

Sarah Harling
Hot Shop Supervisor
George S. Ansell Department of Metallurgical and Materials Engineering
Colorado School of Mines

Signature Student Faculty Senate Proposal

Date 10/02/2020

Lead Academic Faculty: Sarah Harling

Requested Amount: \$7,500.00

Faculty email: Sarahharling@mines.edu

Title of Proposal: Hot Shop
Community Access Expansion
Workshop Series

Lead Department: MME

Collaborator(s) if applicable: Nancy Progar

Proposal Budget Detail:

	Proposal Request (\$)	Direct Match (cash)	Total to be Expended	In Kind Contribution	Total Proposed
People	2,500.00	2,500.00	5,000.00		5,000.00
Equipment	1,000.00		1,000.00		1,000.00
Supplies	4,000.00		4,000.00		4,000.00
Total	7,500.00		10,000.00		10,000.00

Proposal Narrative and Alignment with Mines@150:

The MME Hot Shop provides an outlet for students to interact with the materials they dedicate their career at Mines to in a way that is both cathartic and creative. Liquid metal, forged metal, glass and welding in one space creates potential for interdisciplinary projects in material and in creating art and functional objects. Expanding that community campus wide would allow an opportunity build and focus Mines talent and participate and compete in the national community of makers, artisans, and the contemporary art world. Offering a series of campus wide workshops in foundry, forge, glass and welding introducing students to processes available in the Hot Shop will create an accessibility to the equipment and processes which are the intersection between engineering and art.

What are the primary uses of the requested funds?

Funds would be used to kickstart campus wide workshops and build knowledge and training so that students could lead their own workshops and activities moving forward. It will fund an hourly rate for an instructor, and TA support. The funds will be used to purchase raw materials such as bronze alloy, mold making investment, wax, and steel for fabrication, which would not be accessible for most Mine students other than in a campus wide initiative. The most effective and compelling way to introduce students to processes like casting, welding, forging and glassblowing is hands on experience. We will use the funding to give students that hands-on introduction for which MME has the space and equipment readily available.

How many students per semester will be affected?

There is potential for campus wide participation, which is currently limited only by COVID. This semester, so far, we have held small "Free Pour Fridays", welding open lab, open forge and open glass shops. The amount of students not in a class, who engaged with the Hot Shop will be around 150-200 students by the end of the semester. With funding for materials and more hours to offer workshops and equipment training, that could increase to 350-400 students.

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How will students benefit from the proposal?

Workshops where students learn to make functional objects in an aesthetically motivated, and supportive environment, create challenges that are outside and still complimentary too Mines curriculum. The subjective nature of making a cast iron teapot for example creates space for students to redefine and expand the definition of successful making of objects. Students will also have the opportunity should they continue on in the Hot Shop, to engage with that idea on a national level, meeting peers who are working in complementary fields.

What internal and external to Mines partnerships will be realized as a result of this proposal?

The partnership opportunity for mines on a national level includes historical landmarks and organizations such as Sloss Furnaces Historical landmark and the National Conference on Cast iron art. The Western Cast Iron alliance which includes most major universities in the western united states. The International Conference of Cast iron Art. The Cast in steel competition is a national competition in partnership with the American Foundry Society and Steel founder's society of America which also requires students to create a partnership with a steel industry partner.

Describe viability for the proposal to be self-sustaining.

Offering workshops where students can invest time in making a functional object with aesthetic intent in mind means students will be capable of making objects for fundraising purposes. Offering workshops as an entry point to learning how to use the Hot Shop will promote a student culture of ownership where skills are passed on from students further on in their career at Mines to those who are just arriving.

Describe proposal program expansion, diversity of delivery and scalability.

Long term access to the hot shop is more functional the more students engage. The more departments are involved interdisciplinary collaboration is increased. Offering workshops such as casting copper-alloy optical molds intended for use in glass blowing, deepens student collaboration across material boundaries. Engaging the maker space or machine shop to help design the pattern emphasizes that cooperation further. Students can collaborate using their strengths and interests.

Describe inclusion of entrepreneurship and/or innovation in the proposal, as applicable. (1 to 3 sentences)

Learning a hard skill like welding, casting metal or glassblowing, even if students only engage in one workshop will give them hands on experience which is invaluable regardless of field of study.

Detail the proposal success metrics and monitoring which is included in the proposal. (1 to 5 bullets)

- *Tangible objects are successfully made by students and documented in a virtual gallery which is sharable throughout campus and to donors and alumni.*
- *The number of monthly hot shop users will increase and are from a diverse range of departments and fields of study*

This document is limited to two pages, not including the following attachments as appropriate.

Include the following attachments:

Department Head(s) letters of support

Mines partner collaborators letters of support as, applicable

External partner collaborators letters of support, as applicable

To request this document in Word, please email senate@mines.edu.

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