



Increasing Access and Equity in Fire Science

Prepared by City College
for Montana University System, Office of the Commissioner of Higher Education Targeted Interventions for Increased
Access and Improved Outcomes

Submitted by Kaili Payne

Submitted on 11/16/2022 11:55 AM Mountain Standard Time

Opportunity Details

Opportunity Information

Title

Targeted Interventions for Increased Access and Improved Outcomes

Description

The Montana Perkins Reserve – Targeted Interventions for Special Population grant supports innovation in CTE programs and increasing access to high-quality CTE programs and college and career pathways that lead to high-wage, high-skill, and in-demand occupations by identifying a specific, data-backed opportunity gap and implementing a targeted intervention to close that gap.

This supplemental award aims to:

- Use data to identify an opportunity to improve access and outcomes for CTE students;
- Apply a targeted intervention to increase access to high quality CTE programs;
- Foster innovation in CTE programs;
- Particular focus on remote, rural communities, special populations, and underrepresented subgroups

Awarding Agency Name

OCHE

Agency Contact Name

Ciera Franks-Ongoy

Agency Contact Phone

(406) 449-9132

Agency Contact Email

cfranksongoy@montana.edu

Fund Activity Categories

Education

Departments

Subjects

Public Link

<https://www.gotomygrants.com/Public/Opportunities/Details/ee09c16c-ec0e-4189-8552-0502a6655a2e>

Award Information

Award Range

\$500.00 - \$20,000.00

Award Period

07/01/2022 - 06/30/2023

Award Type

Competitive

Submission Information

Submission Timeline Type

Rolling

Application Review Start Date / Pre-Qualification Deadline



08/31/2022 12:00 AM



Project Information

Application Information

Application Name

Increasing Access and Equity in Fire Science

Award Requested

\$17,995.00

Total Award Budget

\$17,995.00

Primary Contact Information

Name

Kaili Payne

Email Address

kaili.payne@msubillings.edu

Address

3803 Central Ave
Billings, MT 59102

Phone Number

(406) 247-3015

Project Description

Project Description

For FY23, an excess of available funding will be made available to LEAs as a one-time Reserve sub-grant, Targeted Interventions for Special Populations. The vision for Targeted Interventions for Increased Access and Improved Outcomes:

(1) continues to uphold priorities for Perkins Reserve to foster innovation and alignment with high-skill, high-wage or in-demand occupations; and

(2) layers Perkins V priorities to support CTE learners with special population* status and closing the gaps for other subgroups of students, such as groups identified by regional geography, race, and ethnicity, to ensure equal access and outcomes for ALL learners.

The nine special populations recognized by Perkins V includes: individuals with disabilities, individuals from economically disadvantaged families, individuals preparing for a field that is considered nontraditional by gender, single parents including pregnant women, out-of-workforce individuals, English language learners, individuals experiencing homelessness, youth who are in or have aged out of the foster care system and youth with a parent who is a member of the armed forces and is on active duty. For the purposes of Perkins, youth are defined as individuals age 24 or younger.

Reserve Fund grants are awarded to eligible recipients to support activities focused on development, improvement and/or expansion of CTE programs in the priority areas identified below.

Priority Areas for the 2022-2023 grant year are to apply targeted interventions to increase access to, and student success in, high quality CTE programs for students from all backgrounds including special populations and across different races and ethnicities by:

1. Expanding opportunities for students to participate in distance and blended-learning CTE programs.
2. Using technology to enhance career exploration activities.
3. Increasing access to high-quality CTE programs including (but not limited to) those that offer: dual enrollment, work-based learning, and/or industry recognized credentials. *Ideal projects will align with regional workforce demand and the programs offered at the applicant institution.*
4. Increasing the number of opportunities for Montana high school students to explore and engage in college and careers through dual enrollment with priority given to growing CTE-focused dual enrollment programs.
5. Expand public knowledge of Career & Technical Education and/or Montana Career Pathways program through outreach and career exploration events and activities.
6. Introducing new or building capacity for existing industry recognized credentials, with priority given to those available to both secondary (through dual enrollment) and post-secondary participants.
7. Pilot new or innovative CTE programs that include a secondary or middle school partnership, especially those that include work-based learning opportunities.

Required Components for Targeted Interventions for Increased Access and Improved Outcomes

Applicants must address at least one of the priority areas listed above to be considered for funding and all grant proposals must include:

- An identifiable data point or data set demonstrating an opportunity/access gap or area of need by program area, and/or student group.*

- A reasonable targeted intervention that directly addresses the opportunity/access gap or area of need identified.
- A long-term evaluation plan to monitor and respond to outcomes from the targeted intervention.

* We recommend looking at your campus' Perkins Report Card among other tools to identify your opportunity/access gap.

Project Title

Increasing Access and Equity in Fire Science

Start Quarter

Q 2

End Quarter

Q 4

Required Components for Targeted Intervention

What identifiable data point or data set demonstrating an opportunity or access gap are you addressing. Please include specific numbers and data source.

ONET, an online career and employment service, projects that fire service positions within the state of Montana will grow 16% by the year 2030. City College wants to help fill this demand by increasing our enrollment and retention of female students in the Fire Science Program. Zippia, another career and employment company, estimates that not only do women make up fewer than 12% of the firefighting workforce, but they also only earn 82¢ for every \$1.00 earned by men. Until recently, the enrollment of female students within City College's Fire Science Program was above this national average—female students made up 20-30% of the total enrollment within the program. However, over the last two years, City College's female enrollment has declined to 3%. As such, City College is specifically focusing on recruiting, retaining, and graduating female students by increasing access to and equity within the program. By addressing this disparity between female and male enrollment, we will be able to produce more skilled firefighters with a higher earning potential; firefighters with an Associates degree earn on average \$15,000 more per year than an individual without a college degree (Zippia).

What reasonable, targeted intervention have you identified to address the aforementioned disparity in this project.

City College is looking to increase access and equity for women interested in pursuing our Fire Science Associates degree. We have identified two interventions we believe will further support and retain the women already enrolled in our Fire Science Program, while also recruiting potential female students.

First, City College will purchase five full sets of smaller-sized turnouts. This purchase will address one of the top five institutional barriers female fire fighters face as identified by the International Association of Women in Fire & Emergency Service (Women in Fire)—ill-fitting uniforms. More than 80% of female fire fighters interviewed for the National Report Card on Women in Fire Careers list ill-fitting gear as their number one complaint in this largely male-dominated career field. This statistic shows that the lack of equipment that fits women unconsciously signals a desire to exclude them from the career. The smaller gear, coupled with our new, lighter weight breathing apparatus will decrease potential injuries and allow our female fire science students (and more petite male students) to perform optimally. Students will be able to practice safe techniques in PPE that fits. By increasing our inclusivity within the program, we should be able to recruit more female students.

Second, City College will purchase the Lion Bullex ATTACK Digital Nozzle Plus package with weighted hose and laser nozzle to use in conjunction with our recently purchased Lion Bullex ATTACK Digital Fire Training System. The weighted hose simulates the weight and feel of a real fire hose, while the laser nozzle allows our students to practice firefighting indoors.

Our Training System allows students to crawl through dark environments and navigate unknown spaces without visual aids, simulates the look and sound of fire/flames, and most importantly, will allow female students to practice safe, and if necessary, methods of victim rescue adapted to their size and strength in conditions that emulate a real fire. Giving our female students the opportunity to become familiar with adapted techniques follows with industry standards. Regarding female firefighters, the FEMA handbook states that, "Firefighters should be encouraged to perform a task in the way that is most efficient for them and gets the job done safely. Physical techniques for smaller, shorter firefighters should be incorporated wherever possible into physical skills and evolutions." Providing an opportunity for

women to experience the most demanding aspect of firefighting in a safe environment, to allow them the opportunity to try and succeed, is key to promoting firefighting as a viable career opportunity for women.

Describe your long term evaluation plan to monitor and respond to outcomes from this project.

We will survey female Fire Science graduates regarding improvements we have implemented to address the barriers for female firefighters. This survey will inform faculty and staff on whether City College is addressing the needs of our female Fire Science students and how we can improve for future female students. City College will also collect graduation data and employment rates from our female graduates. This data, along with the surveys, will allow the Dean of City College and the program director to determine if the improvements City College has made to the program for female students has enhanced retention and employment rates for this population.

Project Summary

Describe the major activities of the project and who will be involved.

Project #1

The smaller-sized turnouts will be used by our female Fire Science students during their Fire Fighter Foundations I and II classes, as well as their Fire Apparatus and Hydraulics class. By providing them PPE that properly fits, will have removed an identified barrier female firefighters routinely face.

Project #2

The ATTACK Digital Nozzle Plus Package will be employed by the Fire Science instructor in his Fire Fighter Foundations I and II classes, as well as his Fire Apparatus and Hydraulics class. Not only will the ATTACK Digital Nozzle Plus Package strengthen the academic and CTE skills of female students, but it will also provide them the necessary skills to pursue high-skill, high-wage occupations by exposing them to the stressors of structural firefighting in a simulated environment.

The ATTACK Digital Fire Training Panel and Nozzle Plus Package will also be used during our "Pizza, Pop, and Power Tools" event. City College's Fire Science instructor has invited female colleagues to show firefighting techniques and search and victim rescue using the ATTACK Digital Panel and Nozzle, coupled with the department's smoke machine.

Select one or more of the Perkins Reserve priority areas addressed in this project

- Expanding opportunities for students to participate in distance and blended-learning CTE programs.
- Using technology to enhance career exploration activities.
- Increasing access to high-quality CTE programs including (but not limited to) those that offer: dual enrollment, work-based learning, and/or industry recognized credentials.
- Increasing the number of opportunities for Montana high school students to explore and engage in college and careers through dual enrollment with priority given to growing CTE-focused dual enrollment programs.
- Expand public knowledge of Career & Technical Education and/or Montana Career Pathways program through outreach and career exploration events and activities.
- Introducing new or building capacity for existing industry recognized credentials, with priority given to those available to both secondary (through dual enrollment) and post-secondary participants.
- Pilot new or innovative CTE programs that include a secondary or middle school partnership, especially those that include work-based learning opportunities.

What is the timeline for this project? Please provide a brief summary of the key dates for the proposed project.

December

- Purchase the ATTACK Digital Nozzle Plus Package for use in Spring Semester
- Purchase 5 smaller-sized sets of turnouts for use in Spring Semester



Budget Narrative

In less than ~500 words, please provide a narrative explanation of the budget—with the focus on the expenditure of these Perkins funds.

Each line item in the final budget, and it's purpose, should be accounted for in this budget narrative.

Budget Narrative

\$535 will be used to cover indirect costs as outlined in our Indirect Costs agreement.

5 Liberty Coats in a variety of smaller sizes-- $\$1,349 \times 5 = \$6,745$

5 Liberty Traditional Pants in a variety of smaller sizes-- $\$788 \times 5 = \$3,940$

Shipping for turnouts $\$55 \times 5 = \275

Attack Digital Nozzle Plus Package = $\$6,380$

Shipping for Attack Digital Nozzle Plus Package = $\$120$

Budget

Proposed Budget Summary

Expense Budget

	Grant Funded	Total Budgeted
00 - Administrative/Indirect Costs		
Indirect Costs	\$535.00	\$535.00
Subtotal	\$535.00	\$535.00
07 - Minor Equipment		
Turnouts	\$10,960.00	\$10,960.00
Subtotal	\$10,960.00	\$10,960.00
12 - Major Equipment		
Attack Digital Nozzle Plus Package	\$6,500.00	\$6,500.00
Subtotal	\$6,500.00	\$6,500.00
Total Proposed Cost	\$17,995.00	\$17,995.00

Revenue Budget

	Grant Funded	Total Budgeted
Grant Funding		
Award Requested	\$17,995.00	\$17,995.00
Subtotal	\$17,995.00	\$17,995.00
Total Proposed Revenue	\$17,995.00	\$17,995.00

Proposed Budget Detail

See attached spreadsheet.

Proposed Budget Narrative

00 - Administrative/Indirect Costs

5% maximum of total award requested

Indirect Costs

\$535 will be used to cover indirect costs as outlined in our Indirect Costs agreement

07 - Minor Equipment

Include a line item for each program-specific equipment under \$5,000.

Turnouts

5 Liberty Coats in a variety of smaller sizes--\$1,349 x 5 = \$6,745 5 Liberty Traditional Pants in a variety of smaller sizes-- \$788 x 5 = \$3,940 Shipping \$55 x 5 = \$275 Total= \$10,960

12 - Major Equipment

Include a line item for each major equipment over \$5,000.

Attack Digital Nozzle Plus Package

Attack Digital Nozzle Plus Package = \$6,380 Shipping = \$120 Total= \$6,500



Performance Plan