

PERKINS NONTRADITIONAL OCCUPATIONS CTE PROGRAMS OF STUDY GRANTS

2021 – 2022 Approved Proposal

GALLATIN COLLEGE – WOMEN IN TECHNOLOGY CTE WORKSHOP



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PERKINS NONTRADITIONAL OCCUPATIONS CTE PROGRAMS OF STUDY GRANTS Gallatin College MSU Proposal Narrative

1) Title of Project

Women in Technology CTE Workshop

2) Project Description

How does this project encourage the successful recruitment and retention of males or females within a CTE Program of Study that leads to an occupation that is nontraditional by gender? (Males in nursing/healthcare or early childhood education/teaching K-3. Females in STEM-related careers or the trades.)

This Women in Technology project will focus on the education and recruitment of females to three Gallatin College technical CTE careers including IT Network Technology/Cyber Security, Photonics and Laser Technology, and Drafting and CAD Technology. Each of these Gallatin College programs and related industries have a low percentage of female representation in comparison to their male counterparts. According to Zippia.com's nationwide gender statistics just 16.7% of [IT Technicians](#) are female compared to 78.3% men. In the Photonics industry, only 25% of [Photonics Technicians](#) are female, compared to 75% males. And similarly, 22.7% of all [Drafting Technicians](#) in the nation are women, compared to 71.7% men. Unfortunately, female representation consistently decreases as employees receive advanced job titles.

- *What are the major activities or strategies that will be carried out and by whom?*

Educational and recruitment activities will target women of all ages, however, it will include a special focus on high school students and high/middle school instructors. The Gallatin College program directors for the Photonics and Laser Technology, IT, and Drafting and CAD Technology programs will develop two 3-4 day workshops to take place mid-June, 2022.

Throughout the workshops, participants will engage in three hands-on labs specific to each high-tech program in order to learn about the real-world applications of technical skill, the significance of each technical industry, and the need for gender diversity within these fields. Participants will begin by building and configuring an IT Raspberry Pi mini system. They will then learn through hands-on experimentation and instruction about the photonic science that allows the equipment to communicate with a monitor system. Finally, participants will install a real-world drafting application on the Raspberry Pi and will learn how to utilize basic drafting techniques. All participants will learn about the importance of female engagement in the related program industries.

Two workshops with the capacity of 16 participants each will be offered. The first workshop will run Monday-Wednesday and will be open to female high school students and general female community members. The second workshop will run Tuesday-Friday and will be available for high and middle school instructors. This second cohort will experience the same workshop format, however, it will be delivered with supplemental information about duplicating similar instruction within a high or middle school classroom. The fourth day of this workshop will be utilized to provide these high and middle school instructors with supplemental subject education, additional support for classroom instruction (including female student engagement), and information about related course module or dual enrollment development opportunities.

Gallatin College support staff will utilize an educational video about the selected programs, made possible by the 2020/2021 Non-Traditional Perkins Grant, to garner interest in these workshops and share about the CTE program and career opportunities available to females in Montana. Staff will assist program directors in the

logistics of promoting the workshops and supporting attendees in their educational goals as they complete their workshop.

- *Do proposed activities include a secondary/postsecondary partnership component? If so, please describe.*

Gallatin College staff and faculty will connect with Montana high and middle school instructors and counselors to encourage student and personal engagement in these educational workshops. We will work with MSU's department of Academic Technology and Outreach to determine the possible offering of continuing education units for participating high school instructors.

- *What is the timeline for this project?*

The timeline for the project is as follows:

February 1-April 1:

- Individual and collective workshop curriculum development by Gallatin College program directors
- Workshop structure and promotion development by Gallatin College staff

March 1-May 1:

- Active workshop recruitment of female high-school students/community members and all-gender high or middle school instructors
- Purchasing of workshop materials

Mid-June

- Workshop delivery

Late-June

- Establish Dual Enrollment course development opportunities with high school instructor workshop participants

3) Project Outcomes

What are the project goals and intended outcomes?

- *How will the development, implementation, and evaluation of the project encourage students to explore CTE Program of Study that leads to a nontraditional occupation?*

Project development, implementation and evaluation will allow us to encourage female students and community members to explore three dynamic well-paying fields that are in high demand in southwest Montana. A general inclusion of all females in our community will serve to meet the immediate high-tech employee demand and will help to pave the way for future generations of females in these high-tech fields. Simultaneously, a deliberate focus on high school students and instructors will provide general education about valuable CTE programs of study that are readily available to females and worthy of their consideration.

Furthermore, a hands-on experience will help participants to understand the real-world applications of these CTE programs and the wealth of opportunities with local industries. This exposure will contribute to closing the talent gap and diverse workforce needs that plague these industries. Investing grant funds into targeted outreach and supporting the establishment of related high school education will allow us to build awareness and formally integrate Dual Enrollment CTE courses in secondary classrooms.

- *Describe measurable goals and outcomes in detail and how these relate to the project's activities.*

Measurable goals and outcomes will include the following:

- 1) Create and run a three-pronged interactive workshop for 16 female community members and students to introduce them to numerous IT, Photonics, and Drafting industry opportunities while highlighting participant's individual talents that are highly valued within each area of CTE study or career.
- 2) Create and run a three-pronged interactive workshop for 10-16 high or middle school instructors to introduce them to the significance of IT, Photonics, and Drafting as well as the CTE opportunities available to their current and upcoming students. Educate participants on the significance of female contributions within each of these industries and how to encourage students in their pursuit of CTE education.
- 3) Engage and support 3-5 high school instructors in the development of IT, Photonics, and/or Drafting learning modules or courses within their high schools. This will help provide valuable opportunities to establish formal dual enrollment course partnerships or foundational educational content in these three subjects which are otherwise challenging to develop or deliver successfully in secondary classroom settings. Educate high-school instructors on how further support females throughout the instructor's delivery of high-tech subject matter.
- 4) Survey all workshop participants to gain feedback on their workshop experience, interest in future engagement in CTE programs, and ways that Gallatin College faculty and staff can support their CTE goals. This will inform faculty and staff on the success of the workshop and the benefits of offering additional workshops.

- *How many students does the project intend to reach? Males? Females?*

Through the initial workshop roll-out, this project intends to immediately reach 16 female community members ages 16+. We also intend to serve 10-16 high-school instructors, of either gender but preferably female, who are interested in learning about high-tech CTE instruction and programs, and who are also committed to supporting high school females in their pursuit of non-traditional CTE careers.

4) Evaluation

How do you intend to evaluate your progress or success in meeting the project's stated goals and outcomes?

- *Describe the evaluation plan and activities*
- *Identify the responsible parties for the evaluation activities*

Evaluation of the project's success will occur in four key ways.

- 1) Workshop enrollment numbers will be evaluated by outreach staff members in the months and weeks leading up to the workshop dates as well as post-workshops. These numbers will be key in evaluating our success and strategies in engaging community members in the project.
- 2) Participants will complete a feedback survey at the end of their workshop. This will inform program directors on their effectiveness to drive interest in their CTE area of study. It will also assist program directors and college outreach staff in determining best practices in future program outreach activities and the potential for similar workshops.

- 3) Upon project completion, outreach and enrollment staff members will track the enrollment status of participants who engaged in the initial community/student workshop. This will shed light on the effectiveness of our workshop in generating long-term participant interest in pursuing high-tech CTE programs.
- 4) The number of high school instructor participants who commit to developing and incorporating relevant curriculum into their schools will inform the success of the project in educating instructors about the importance of CTE in southwest Montana. Gallatin College's Associate Dean and Dual Enrollment manager will work with program directors to identify committed instructors and will then be able to assist them in integrating content into high school classrooms.

5) Budget

Complete the proposed Budget Sheet and provide no more than a **one-page Budget Narrative of explanation of the budget**—with the focus on the expenditure of these Perkins funds.

- A. A total of \$7,500 will be budgeted for Gallatin College and Dual Enrollment high school personnel:
 - \$2,000 per individual is budgeted for up to three Gallatin College Program Directors/faculty to compensate them for their workshop planning, curriculum development, and instructional time not compensated by their current contracts. (Maximum of \$6,000)
 - \$500 will be offered to up to three area high school instructors as stipends to begin establishing IT, Photonics, or Drafting oriented dual enrollment classes or modules in partnership with Gallatin College.(Maximum of \$1,500)
- C. Instructional supplies include the following:
 - \$180 Raspberry Pi handheld systems for up to 32 participants = \$5,760
 - \$ 18 liquid crystal light valve controllable shutter glass and corresponding monitor supplies for up to 32 participants = \$576
 - \$334 for freight or miscellaneous materials
- D. \$715 is allocated to indirect costs per Montana State University guidelines.
- E. \$115 will be utilized to create and distribute logistical information about the workshop to prospective participants

Budget Worksheet

Title of Project: Women in Technology CTE Workshop

Project Start Date: February 1, 2022 Project End Date: **June 30, 2022**

	Perkins Nontraditional Grant Funds	LOCAL*	IN-KIND & OTHER SOURCE*	TOTAL
A. Staff				
Salaries – Faculty \$2,000 for up to 3 faculty	\$6,000			\$6,000
Benefits				
Other: HS Instructor Stipends \$500 for up to 3 instructors	\$1,500			\$1,500
B. Students				
In-State Travel				
Supplies				
Other				
C. Supplies and Equipment				
Office Supplies (phone, copier, etc.)				
Workshop Instructional Supplies	\$6,670			\$6,670
Equipment (less than \$300)				
Other				
D. Indirect/Overhead Indirect Cost @ 5% maximum	715			715
E. Other (Include explanation)				
Workshop promotion	\$115			\$115
COLUMN TOTAL	\$15,000			\$15,000

*Matching funds from other sources are not require