



Your Roadmap to CTE Programs as a Working Professional

WICHE PRESENTATION

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gbcnv.edu



Founded in 1967

4 Rural Nevada Campuses
Elko | Winnemucca | Ely | Pahrump Valley

75+ Programs and Certificates

Nevada's Most Affordable College

**#1 Community College
Graduation Rate in Nevada**

GREAT BASIN COLLEGE

Our

Mission

**Transforming Lives
Through Education**

Roadmap to Hybrid Learning

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Create Access for Students to Meet Industry Demands	
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Our Story

- Traditional Industrial Technology programs
 - Welding
 - Diesel Mechanics
 - Industrial Maintenance
 - Electrical Systems
 - Instrumentation
- Accelerated AAS degree
 - Monday - Thursday, 5 hours per day
- 68% of GBC Students are Part-time Learners
 - CTE programs did not fit our student demographics
 - Non-traditional, working adults with competing priorities





Industry in Rural Nevada

Mining Companies and Contractors

- Gold, Lithium, Copper, and other critical minerals
- Miners' schedules - rotating shifts
- Lucrative income without formal education
- Skilled trades gap
- Develop employees with education

Hybrid Vision At GBC

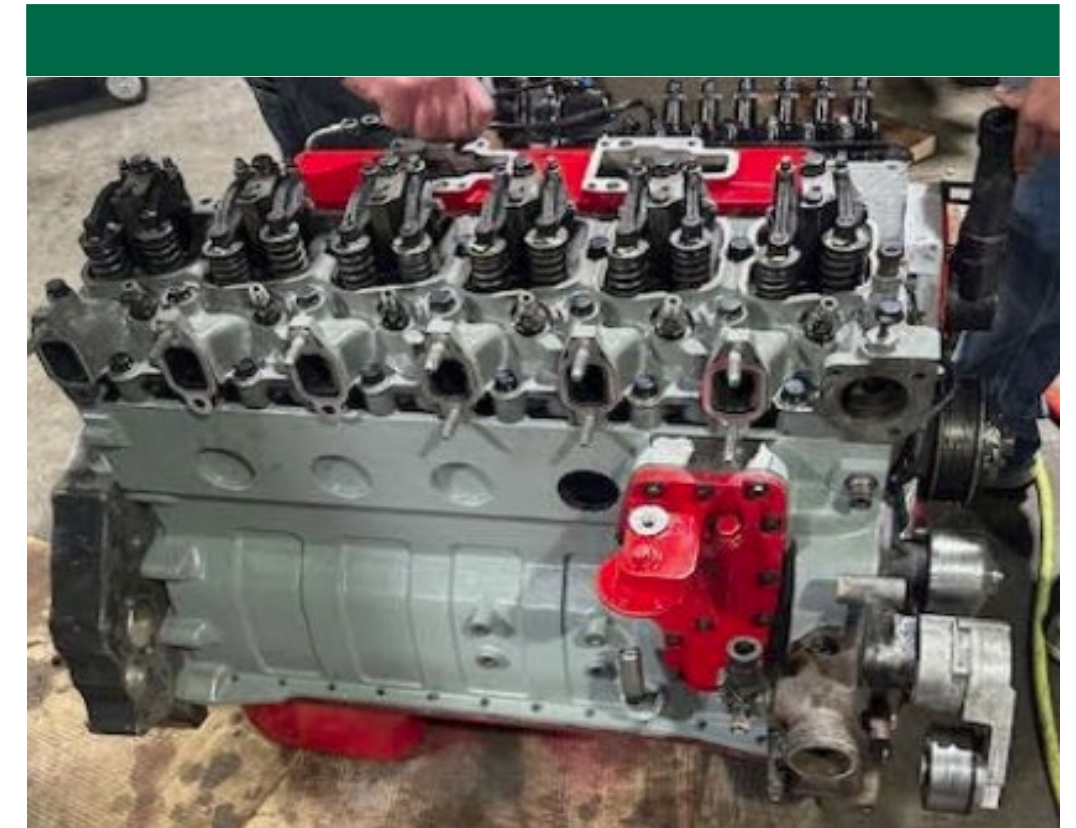
Started with 3 programs



Electrical Systems



Instrumentation



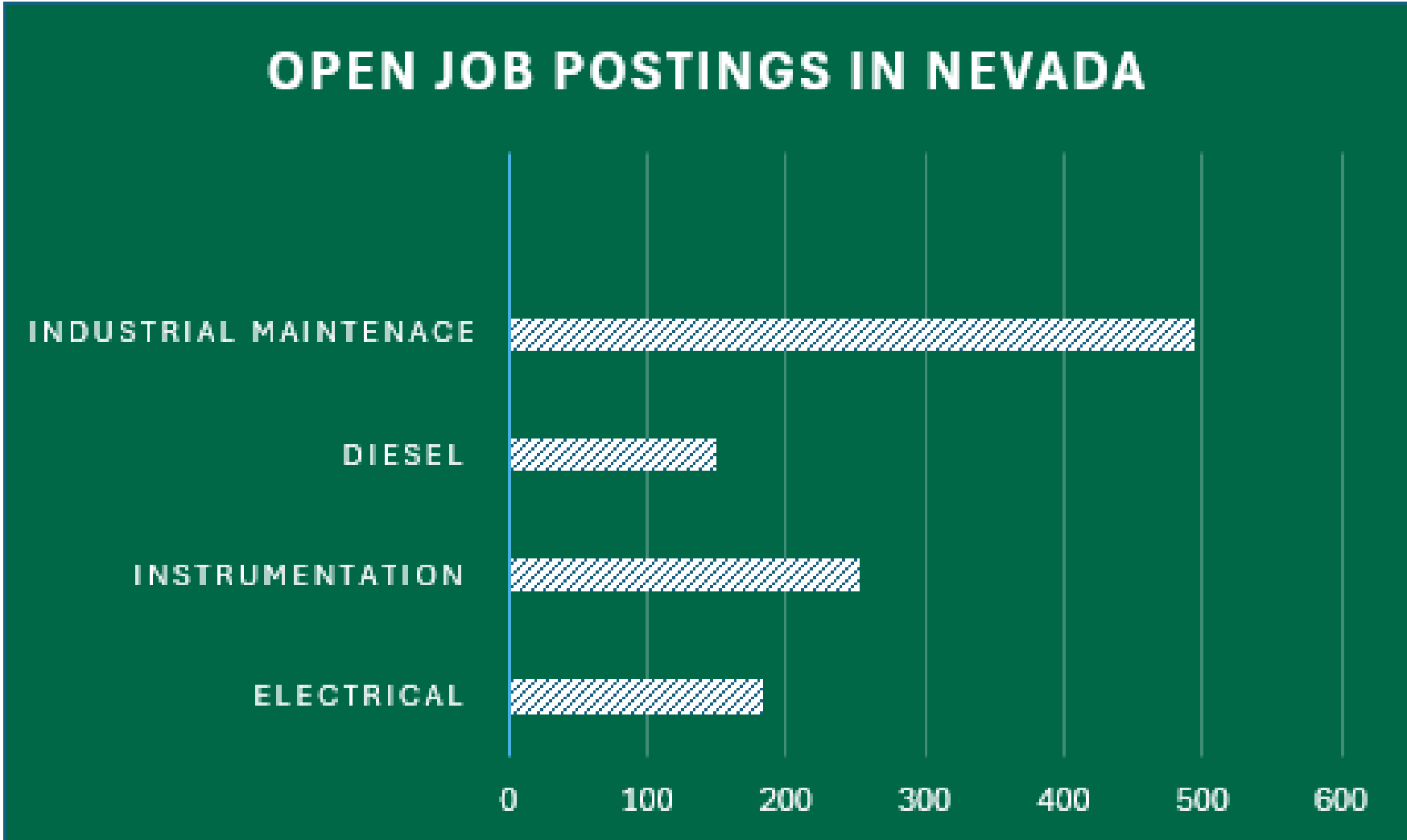
Diesel Technology

Why Hybrid

Access and Industry Demand

- **Entry point/exit point**
 - Expanded existing programs by creating new sections for increased capacity
 - Created new exit points for graduates to begin employment

- **Growth in industry**
 - High demand for workforce in Electrical, Instrumentation, Diesel, and Industrial Maintenance
 - Automation leading to the need to upskill current workforce



Competing Student Priorities



- Accelerated, everyday schedule conflicts with work shifts
- Long commutes to campuses, and/or work location (mines are rural)
- Limited access to smaller, rural communities
- Juggling family, community, and other non-work priorities
- Balancing mortgages, household bills, and school load

68% part-time students

71% hybrid students
are over 25 and work
full-time

20 hours of class
time per week in
traditional
programs

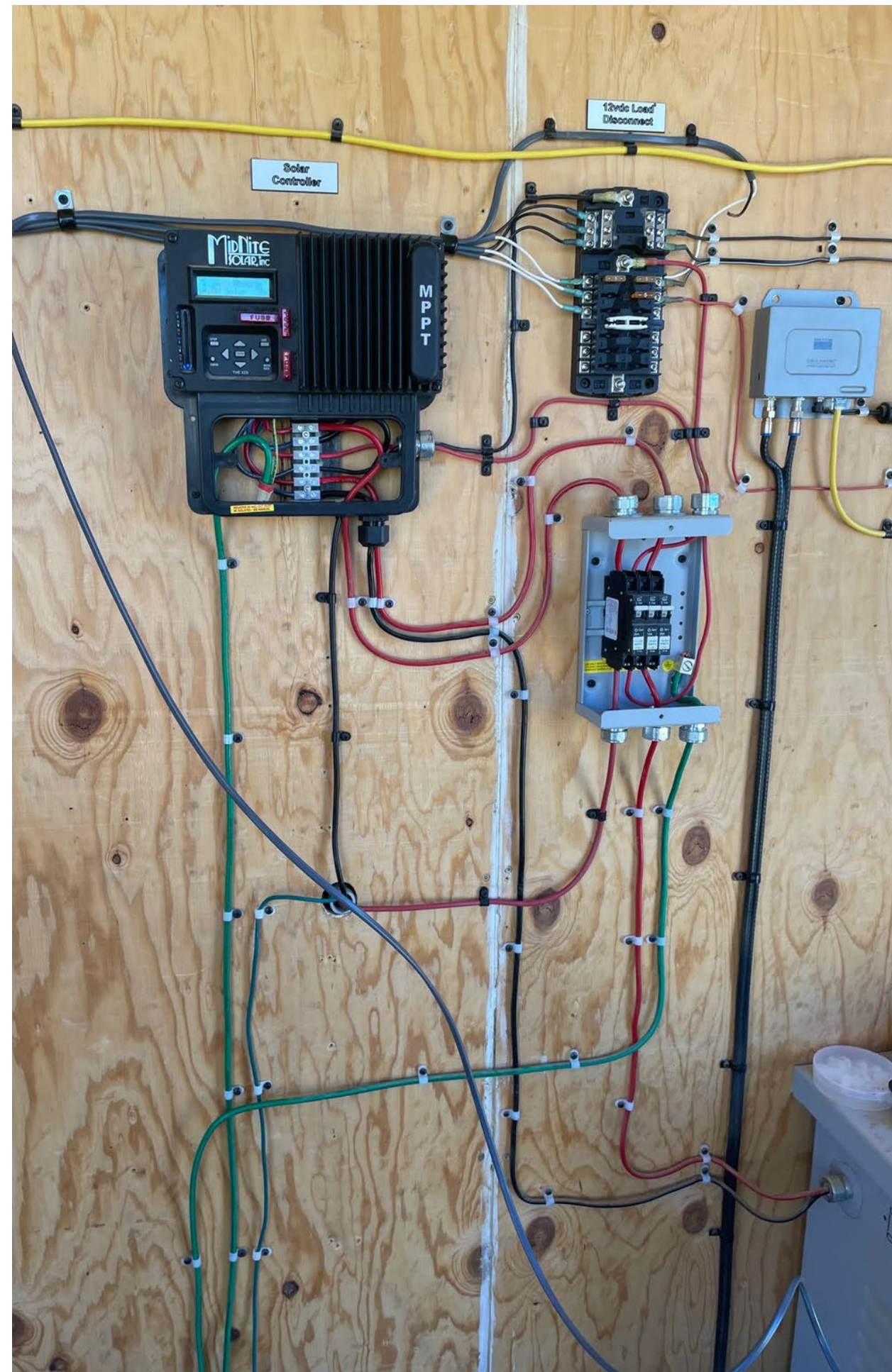
60% of students are
from under-
represented groups

Student Demographics



What Students are Saying

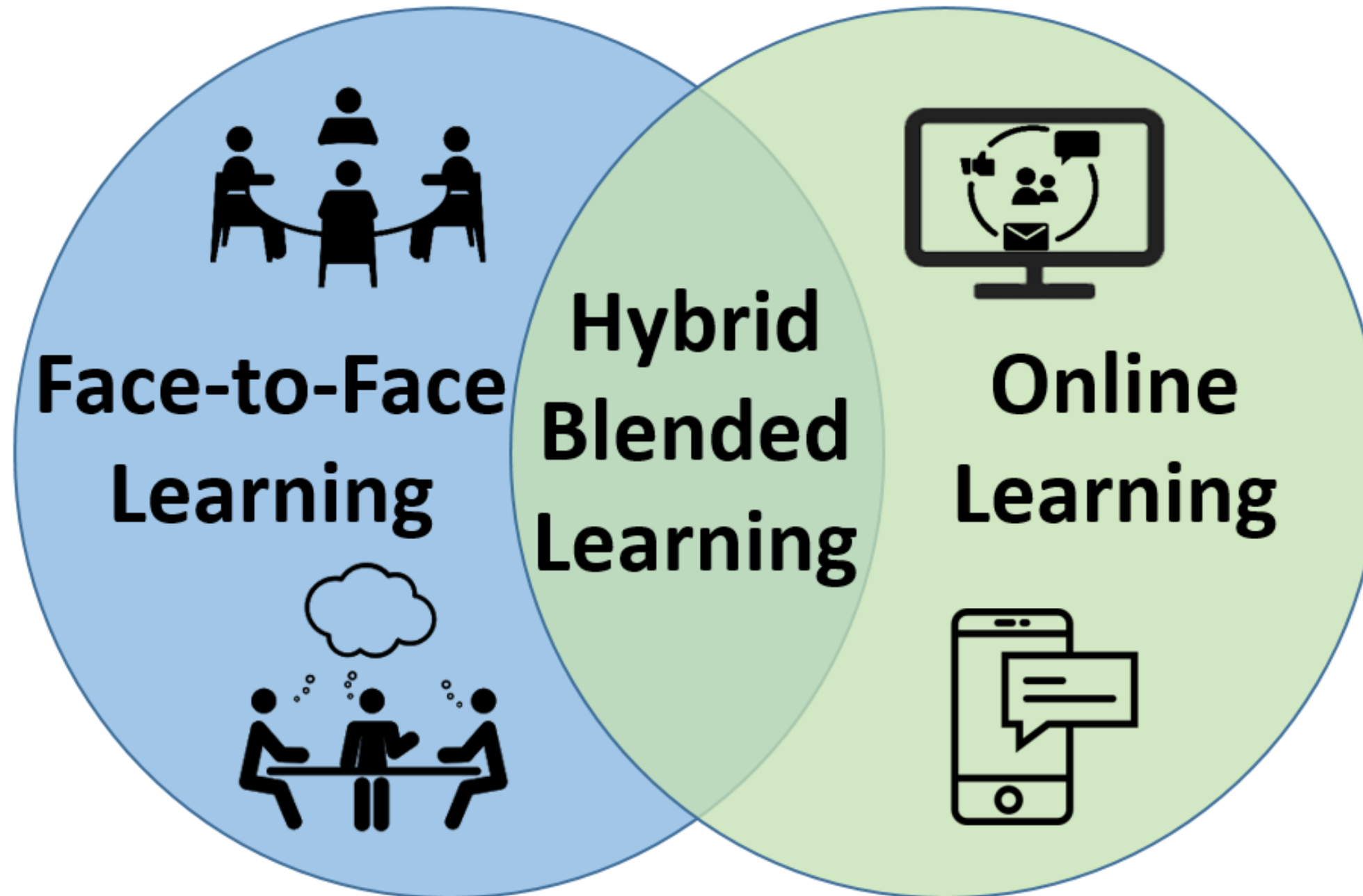
When I first heard about this Hybrid Program, I was very excited. I thought that it was a great opportunity to further my knowledge in the field while also still being able to work full time. I would not have been able to do this if I would have had to work part time and give up some of my income. I have talked to multiple people in my department who have expressed interest in the program. However, it is something that they are not willing to do if they will not be able to work full time. The Hybrid Program allows me to still bring money to the table for my family while also developing my skills in order to progress in the field. Achieving that would be very difficult and almost impossible at this point in my career and life.



The Hybrid program allows me to still bring money to the table for my family while also developing my skills...

Student, Winnemucca Instrumentation

Hybrid Model



Didactic Learning Requirements

- Student Engagement
 - Video
 - Student-t- Student Interaction


Activity 1-4 Linear Interpolation

Pressure	Temp
PSIa	F
195.729	380.0
153.010	360.0

$$y = y_1 + \frac{(x - x_1)(y_2 - y_1)}{x_2 - x_1}$$

The saturated steam temperature is 365.5F. What is the equivalent pressure in psia?

Okay, so we have two known variables. We know that when the saturated steam temperature is 380 degrees, we get a pressure of 195.79.



- Utilize online tools and resources
 - Canvas
 - Automation Studios
 - Vector Learning
 - Industry Trainings


Chapter 1 Power Point Video Lecture

INSTRUMENTATION AND PROCESS CONTROL


Chapter 1 — Instrumentation Overview

Electricians may be called upon to install and configure instruments in the field.

Electrical Troubleshooting



calibrate them and configure them as well as controllers to set up for our process.



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4:00 / 6:13



PH Lab



Conduit Bending



Valve Positioner Calibration



Diesel Hydraulic Pumps

Practical Application

- Weekly, in-person labs
- 15-month programs to meet the part-time student demographics
- Faculty and peer collaboration
- Real-life scenarios and training
- Employer supported learning with projects that match curriculum

Industry Collaboration

The hybrid diesel technology program has been a **game changer** for our Kinross Nevada sites! Our industry is experiencing more trade skills professionals leaving the mines than coming into the mines, creating a **significant gap** in diesel mechanics, electricians, instrumentation technology, and welders. The hybrid programs make it **feasible for folks to work full-time while completing higher education**.

Once the employee had some technical knowledge, we transferred them into a full-time maintenance technician position, where they get **hands on experience** while completing their certification.

-Kinross Nevada HR Manager





What We Learned: Year 1

These practices draw from our experience in implementing our hybrid programs. With strong structure, flexibility, and support these programs have the potential to outperform traditional programs for adult learners.

- **Intentional Course Design & Backward Planning**

- **Clear Expectations & Consistent Communication**

- **Technology & Accessibility Foundation**

- **Flipped or Blended Andragogy**

- **Faculty Training & Support**

- **Promote Active Learning & Engagement**

Benefits of Hybrid Learning



Balance

Flexibility

**Generates
Rotations for
Workforce Entry**

**Workforce Skill
Set**

Starting Your Own Hybrid Workforce Programs

- Plan purposefully and work with subject matter experts
- Build from existing traditional programs
- Utilize existing technologies
- Launch, evaluate, adjust, and improve





Questions

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