Linking Secondary and Post-Secondary CTE to Pre-Apprenticeship
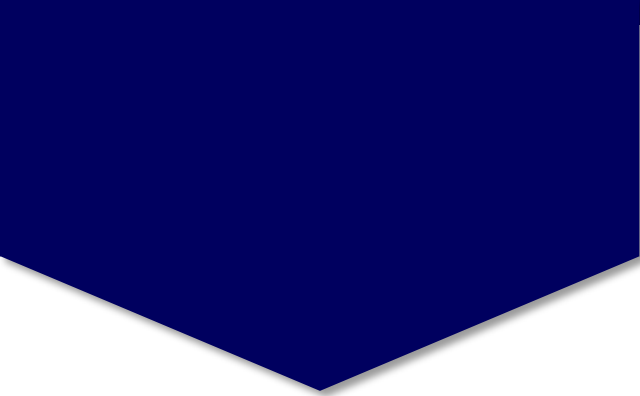
Our Work – Three Strategies

- Provide technical assistance (TA) on a national scale to:
  - RA program sponsors
  - State and local workforce boards and American Job Center (AJC) programs and operators
  - K-12, college and university, Adult Education, and Career and Technical Education programs
  - State and federal policymakers
- Engage and build partnership with and between essential RA stakeholders
- Coordinate with federal and state investments

SAFAL PARTNERS
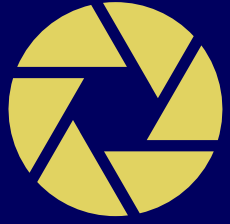
Apprenticeship: Why and What

Understanding Apprenticeship

❏ How would you rate your general knowledge of Registered Apprenticeship?

❏ How would you rate your knowledge of the existing Registered Apprenticeship programs in your local area?

What is Apprenticeship?

A Proven Workforce Solution

Registered Apprenticeship is an **industry-driven, high-quality** career pathway enabling employers to **develop new hires** and **upskill current workers** for critical occupations.

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Five Core Components

Employer involvement
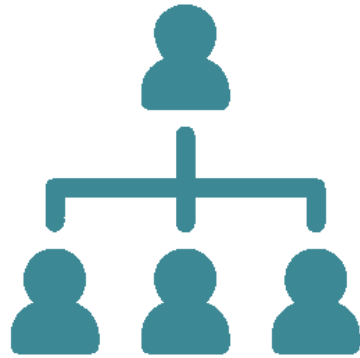
Structured on-the-job learning

Related instruction

Rewards for skill gains

National Occupational Credential

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What's Driving RA Expansion?

Facts

- Half-life of skills is five years

- Shrinking labor market participation rate

- Rapidly evolving technology, Artificial Intelligence (AI), automation, robotics

Implications

- Shift from K-12 to lifelong learning

- Career pathways with opportunities for advancement not just a job

- Businesses will need to "build, not buy" talent by training them

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Spanning all Sectors

Healthcare

Cybersecurity

Information Technology

Biotechnology

Transportation

Construction

Financial Services

Advanced Manufacturing

Hospitality

Engineering

Energy

Telecommunications

Businesses Using RA

Why They're Choosing RA

Would you switch to a new employer for training opportunities?

- 36%
- 34%
- 18%
- 6%
- 6%

Legend:
- ■ Extremely likely
- ■ Very likely
- ■ Moderately likely
- ■ Slightly likely
- ■ Not likely at all
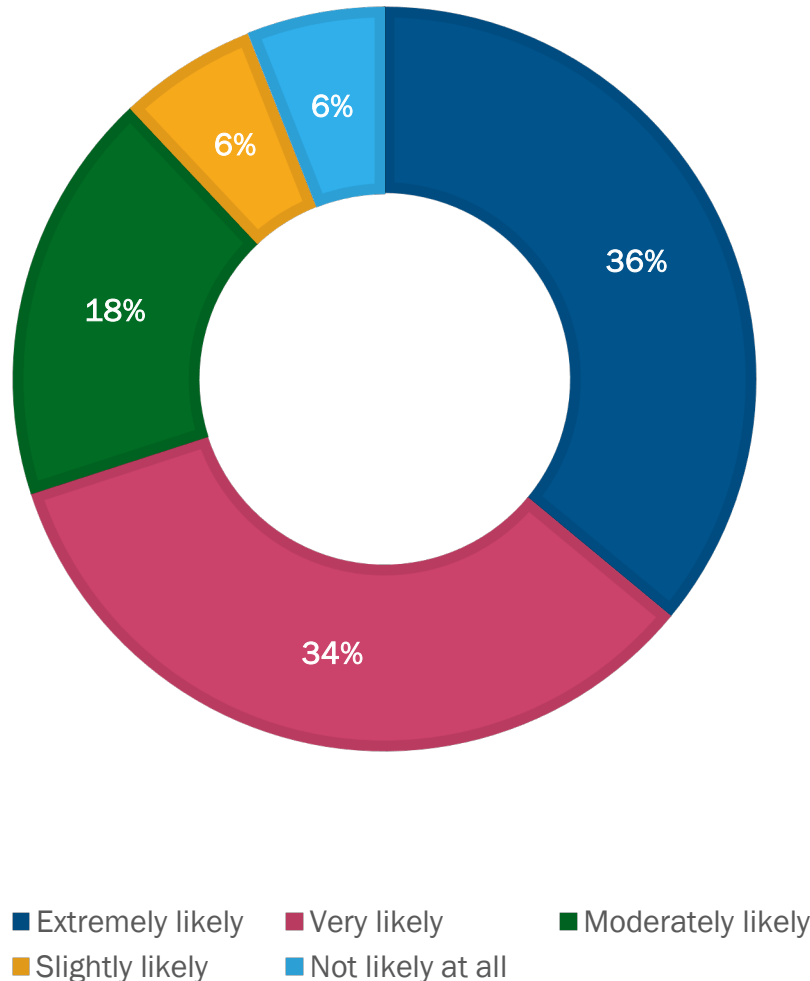
- **Attract New Talent :** 70% of workers would be "extremely" or "very" likely to switch to a new employer offering training opportunities

- **Proven ROI :** Employers report on average $1.47 for every $1 invested in RA – highly cost effective in the long term

- **Expand Workforce :** With a training plan in place from day one, employers can take a skills-based approach to hiring which creates much larger talent pipeline

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Why They're Choosing RA

Better Rate of Hire

- Co-Ops: 37%
- Interns: 55.50%
- Apprentices: 94.00%
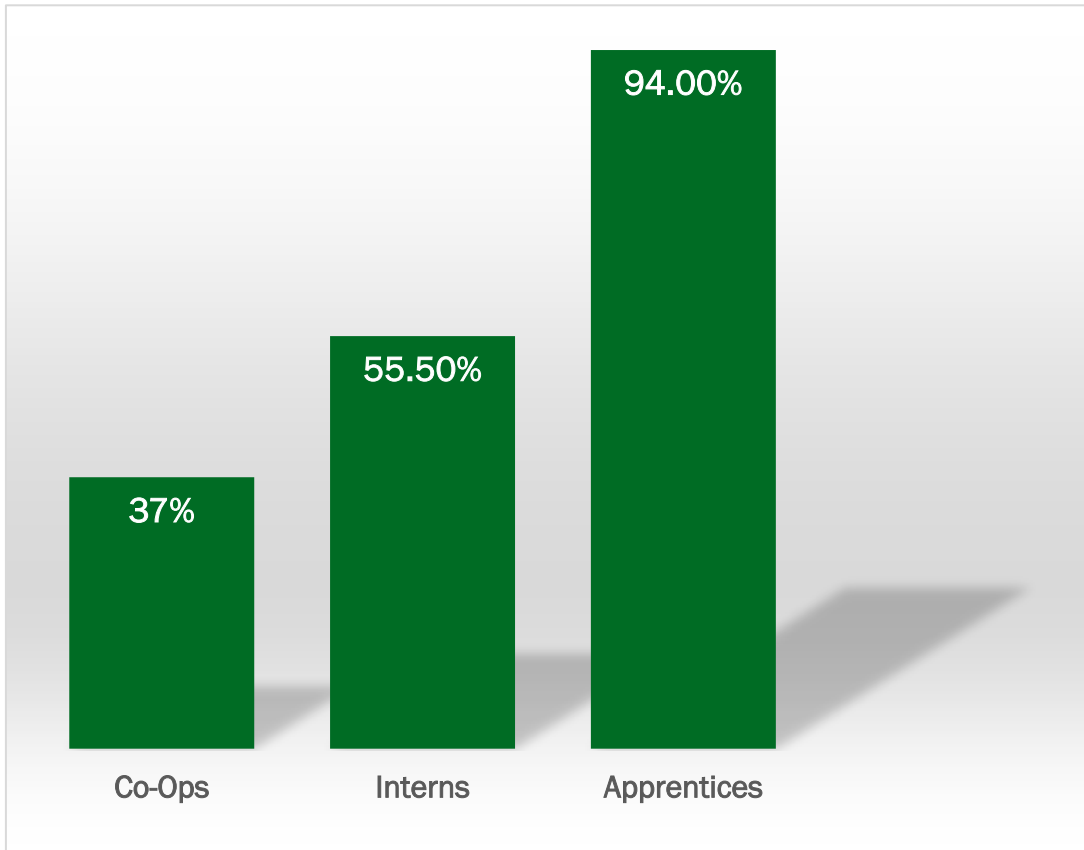
Higher 1-Year+ Retention Rate

- Co-Op: 49%
- Interns: 62%
- Apprentices: 91%
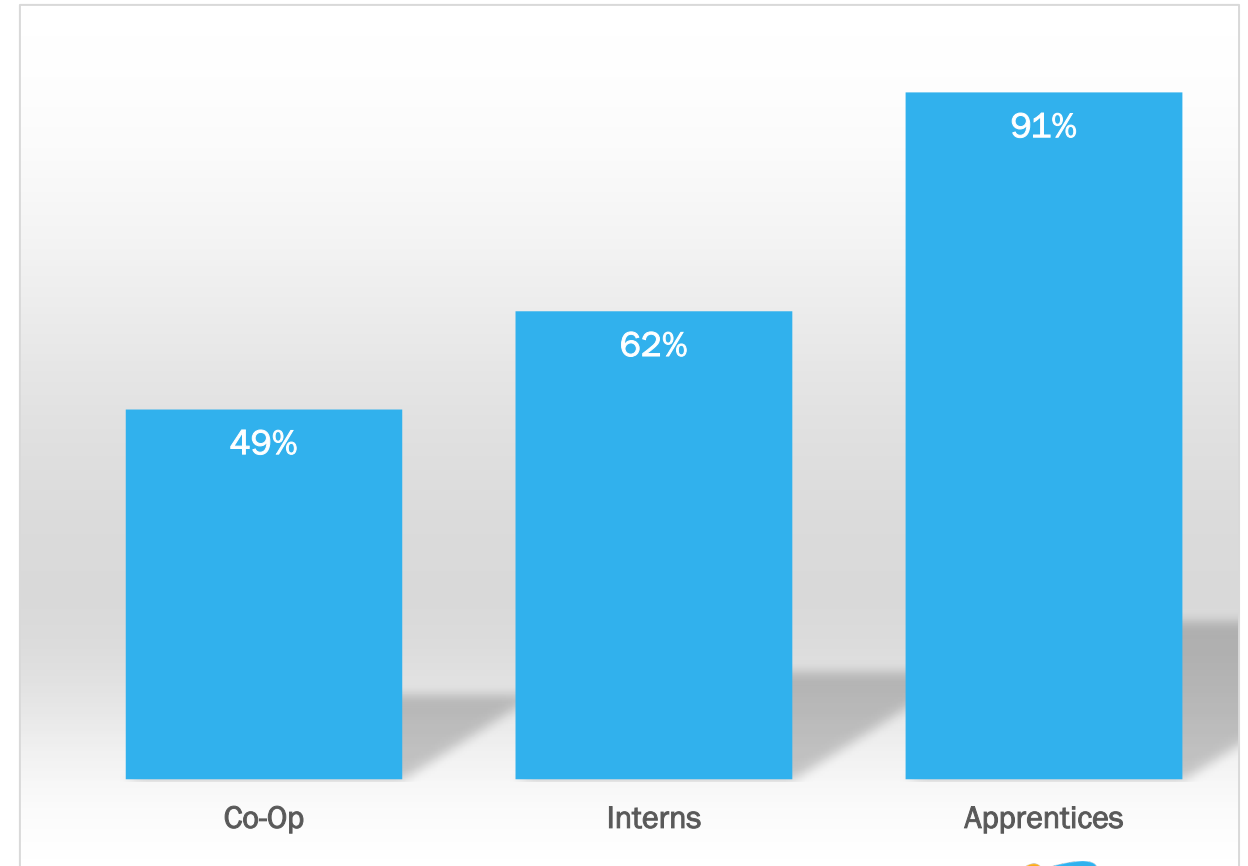
Sources: Apprenticeship.gov (USDOL),
National Association of Colleges & Employers "2020 Internship & Co-Op Report"

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Pre-Apprenticeship: What, Why and How

What is Pre-Apprenticeship?

- A program or set of strategies designed to prepare individuals for entry into RA programs.

- Not federally overseen / not in National Apprenticeship Act = more flexibility

- Expanding and some SAA implications
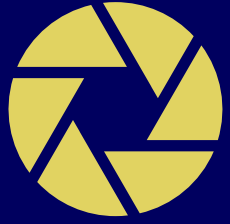
6 High-Quality Hallmarks

Transparent entry and success requirements

Training in skills sought by employers

Skills training through WBL and hands-on learning

Student support for persistence

Results in 1+ industry-valued credentials

Direct entry/preferred application for linked RAP

Role of CTE in RA

Engage Employers

- Supply a pool of candidates
- Deliver relevant workforce training (soft skills and technical skills) that maps to required related instruction

Create Student Pathways

- Design on-ramp to accelerate entry
- Leverage students' instruction and experience to achieve multiple outcomes
- Provide training and instruction for in-demand careers

Collaborate with Workforce

- Recruit program candidates (adults)
- Access funding for training costs (ITA)
- Access supportive services for WIOA-eligible students

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Getting Started: System Connection

Identify local RA sponsors with programs aligned with your programming

Map of OA and SAA States

■ Office of Apprenticeship (OA)   ■ Recognized State Apprenticeship Agencies (SAA)

https://www.apprenticeship.gov/about-us/state-offices

Employer Talk: Quals and Entry

All RAPs have Minimum Qualifications and Selection Procedures
- Show:
  - What applicants will need/be able to pass
  - Prospective talent pool sources
- Can be used for students' RAP application work
- Can help with pre-app program marketing

▴ **B. Minimum Qualifications - 29 CFR §29.5(b)(10)**

An apprentice must be at least 16 years of age, except where a higher age is required by law, and must be employed to learn an apprenticeable occupation. Please include any additional qualification requirements as appropriate (optional):

☐ There is an educational requirement of High School Diploma or GED unless currently in high school
☐ There is a physical requirement of _____
☐ The following aptitude test(s) will be administered _____
☐ A valid driver's license is required.
☐ Other _____

(List all other requirements)

SELECTION PROCEDURES

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

The sponsor will recruit from (but not limited to) the following sources:

Incumbent workers

Colleges, Universities, Community Colleges, and Career and Technical Education Centers

One-Stop Centers, as established under the Workforce Investment Act, and reauthorized in the Workforce Innovation and Opportunities Act of 2014.

Employer Talk: Standards Review

Discuss Program Standards

- Minimum qualifications
- Selection procedures
- Ideal core knowledge (RI)
- Ideal basic foundational skills (OJL)

Appendix A

WORK PROCESS SCHEDULE
NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR
O*NET-SOC CODE: 15-1244.00   RAPIDS CODE: 1132CB

This schedule is attached to and a part of these Standards for the above identified occupation.

1.   APPRENTICESHIP APPROACH

☐   Time-based   ☒   Competency-based   ☐   Hybrid

2.   TERM OF APPRENTICESHIP

The term of the apprenticeship is a minimum of 1 year with an OJL attainment of all competencies listed, supplemented by the minimum required 144 hours per year of related instruction from the courses herein. (Note: The competency-based training approach does not require hours.)

3.   RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: 1 Apprentice to 1 Journeyworker.

4.   APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker wage rate, which is: $25.00.

Wage Schedule:

Entry Wage = $15.00

5.   PROBATIONARY PERIOD

Every applicant selected for apprenticeship will serve a probationary period of 12 weeks.

6.   SELECTION PROCEDURES

Please see page 8.

Mapping to Program

- Evaluate current program for alignment
  - Curriculum for RI
  - Lab work, WBL for OJL
  - Hours (for TB programs) or competencies (for HY/CB programs)

Employer Talk: On the Job Learning Mapping

All RAPs have Work Process (OJL) Outlines
- Show model:
  - Time-based
  - Hybrid
  - Competency-based
- Show core skills required for RAP – can map to CTE lab work, WBL

WORK PROCESS SCHEDULE
NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR
O*NET-SOC CODE: 15-1244.00   RAPIDS CODE: 1132CB

Description: Install, configure, and maintain an organization's local area network (LAN), wide area network (WAN), data communications network, operating systems, and physical and virtual servers. Perform system monitoring and verify the integrity and availability of hardware, network, and server resources and systems. Review system and application logs and verify completion of scheduled jobs, including system backups. Analyze network and server resource consumption and control user access. Install and upgrade software and maintain software licenses. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software.

The work process schedule is intended as a guide. It is not to be followed in any particular sequence, and it is understood that some adjustments may be necessary in the apprentice's assignments allotted for different work experience. Overall, an apprentice shall receive sufficient experience to make him/her able to demonstrate a high level of expertise in the work processes which are part of this occupation. In addition, the apprentice shall be fully instructed in safety and OSHA requirements as may be applicable to maintain a safe and healthy work environment.

The following is the rating system that will be used to determine competency:

Rating System	Description	Points
Exceeds All Expectations	Consistently exceeds performance standard established for the time in position. Achieves results above and beyond what is required. Extends themselves in their roles to exceed personally and as a team to achieve exceptional results.	5
Meets & Exceeds Some Expectations	Apprentice not only meets all expectations in a fully satisfactory way, but exceeds some of the objectives.	4
Meets Expectations	Consistently meets the performance standards established for time in position. Handles routine tasks & some unexpected situation with the usual amount of supervision. Can continue to develop with coaching, advanced training or more experience	3
Meets Some Expectations	Apprentice occasionally meets some of the objectives related to this goal, but does not meet others in a fully satisfactory way. This performance level generally indicates the need for additional coaching, training or other plan for performance improvements.	2
Does Not Meet / Meets Some Expectations	Does not consistently meet performance standards established for time in position. Requires basic training, coaching or experience to improve performance and become consistent. Additional follow-up will be necessary.	1
Does Not Meet Expectations	Clearly and repeatedly does not meet the performance standards established for time in position. Additional follow-up and specific suggestions for improvement mandatory.	0

Apprenticeship Competencies – Technical

	Competency Checklist	Rating	Validated by Initials and date
1.	**Server Administration**		
a.	Deploy and manage Linux distributions/ Windows Server		
b.	Update and monitor system components		
c.	Storage solution management		
d.	Manage file and print services		
e.	Security encryption and audit configuration		
f.	Monitor and configure network services		
g.	Create availability and disaster recovery plan(s)		
h.	Troubleshoot server issues and package compatibility		
2.	**Software and Network Management**		
a.	Implement and manage network solutions		
b.	Installing/uninstalling using package managers		
c.	Building software components from source repositories		
d.	Clustering and virtualization options for Linux systems		
e.	Configuring virtual machines using e.g., VirtualBox, VMWare, Xen		
f.	Balance network load		
3.	**User and Group Management**		
a.	Configure domain controller(s)		
b.	Implement and manage group policy		
c.	Maintain active directory domain services		
d.	Supervise and monitor active directory certificate and rights management		
e.	Research past resolutions and clean up notes/records on architecture and data flow diagrams or related documents		
4.	**Perform other duties as assigned**		
	Plan and configure mailbox and client access servers		
	Manage groupware and services (e.g., Zimbra, Horde, OpenXchange)		
	Work within existing task assignment and record-keeping systems		
	Open, respond, manage, and close tickets		
	Document resolution information		
	Update documentation on configuration and status of servers		
	Research past resolutions and clean up notes/records on architecture and data flow diagrams or related documents		

Employer Talk: Related Instruction Mapping

All RAPs have Related Instruction Outlines

- Min. 144 hours/yr
- Show:
  - Core technical instruction
  - Employability instruction
- Can be mapped to CTE courses

RELATED INSTRUCTION OUTLINE
NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR
O*NET-SOC CODE: 15-1244.00   RAPIDS CODE: 1132CB

This RTI gives guidance, knowledge, and proficiency in the core skills necessary for a career as a Network and Computer Systems Administrator.

Core Career Path Courses (C), Assessment (A), Practice Test (PT), and Virtual Lab (L)

Course Name	Approximate Hours
System Administrator Work-role Assessment (A)	.5
CompTIA A+ 220-1001 (C)	13.0
CompTIA A+ 220-1001 Exam (PT)	2.0
CompTIA A+ 220-1002 (C)	26.6
CompTIA A+ 220-1002 (L)	25.0
CompTIA A+ 220-1002 Exam (PT)	1.5
Enable Disk Encryption using BitLocker & KeyVault (L)	1.0
Fundamental Windows Security Overview (C)	1.0
Hyper-V (C)	5.5
Performing Microsoft Windows 10 Install (C)	1.5
Microsoft Certified Solutions Associate Certification (C)	5.5
Microsoft 365 Fundamentals (MS-900) (C)	4.5
Configure Windows Firewall ACL Rules (L)	1.0
Configure Local Security Policy on Server 2016 (L)	1.0
Intro to Powershell Scripting (C)	2.0
Create Basic Script in Windows PowerShell (L)	1.0
Use PowerShell to Gather Comp. Info in Windows (L)	1.0
Use Arrays in Windows PowerShell (L)	1.0
Windows PowerShell (L)	1.5
Use Sysinternals Suite to Review Permissions on Windows System (L)	1.0
VMWare Foundations (C)	3.0
VMWare Certified Professional – Cloud (L)	21.5
How to Use Unicornscan (BSWR) (C)	.5
Networking Fundamentals for Security Practitioners (C)	1.0
Wireless Network Fundamentals for Security Practitioners (C)	.5
Linux Fundamentals for Security Practitioners (C)	2.0
CompTIA Linux+ (C)	8.5
Linux Familiarization Lab (L)	1.0

Employer Talk: CPE/CPL

Provide Employer Partner with CPE/CPL Tool
- Maximizes students' pre-apprenticeship program investment
- Accelerates apprentice program completion timeframe

PART B: PROGRAM SPONSOR'S INFORMATION

1. Sponsor's Name and Address (No., Street, City, State, Zip Code)
   ACME Tech Services
   Telephone Number   Cell Phone Number (Optional)

   E-mail Address

   a. Sponsor's Principal Place of Business Address (If different from Sponsor's address above)

   b. Employer's Name and Address (If different from Sponsor's address above)

2. Occupation Title (The work processes listed in the standards are part of this agreement.) **Network Systems Administrator**
   a.   O*NET Code: **15-1244.00**
   b.   Interim Credentials Offered (i.e., Career Lattice Occupation)?
        ☐ Yes   ☐ No

3. Occupation Type (Select One)
   a. ☐ Time-based
   b. ☒ Competency-based
   c. ☐ Hybrid

4. Term Length (Hrs., Mos., Yrs.)

   4000

5. Probationary Period (Hrs. or Wks.)

   500

6. Credit for Previous On-the-Job Learning Experience (Hrs.):

7. Credit for Previous Related Instruction Experience (Hrs.):

8. Date Apprenticeship Begins

9. Related Instruction Provider(s) Name and Address
   State Community College

   a. Total Length of Related Instruction
   288 hours

   b. Are Wages Paid During Related Instruction?
   ☐ Yes   ☒ No

   c. Hours When Related Instruction Is Provided
   ☐ During Work Hours
   ☐ Not During Work Hours
   ☒ Both During and Not During Work Hours

10. Progressive Wage Schedule: a. Apprentice's Entry Wage $20.00   b. Journeyworker's (i.e., Experienced Worker's) Wage $28.00

Period	1	2	3	4	5	6	7	8	9	10
Duration (If Applicable)	2000	2000								
Competencies (If Applicable)	50%	75%								

Next Step: Partnership Work

Collaborating with Employer

- Identify employer-based options for pre-RA to RA entry process (i.e., job shadowing)
- Co-design program application and referral process

Working with Workforce

- Identify potential support services for pre-apprentices to facilitate completion (i.e., transportation, equipment, etc.)

Go To Market

Employers want to know that successful program completers have:

- ❑ relevant foundational skills (experience can be applied toward OJL requirement through credit for prior experience)

- ❑ relevant technical knowledge (coursework can be applied to RTI requirement through CPL)

- ❑ successfully earned related credential/certification – or are equipped and eligible to test out

- ❑ met minimum qualifications

- ❑ may be eligible for continued workforce supportive services during RAP

Goal: Direct entry agreement

Thank You

Katie Adams
Senior Director
katie.adams@safalpartners.com

Connect with the Center
- https://dolcoe.safalapps.com

Become a Partner
- Open your camera
- Scan QR code