



CompTIA[®]
Apprenticeships for Tech

 **Maher & Maher**
Investment Advisors for Talent Development.
An Affiliate of the American Institutes for Research[®]

 DISCOVER
APPRENTICESHIP[™]

CareerSource Florida
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CompTIA[®]

Apprenticeships for Tech

Delivering Diverse Tech Talent to Every Industry

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Agenda

- **Introductions**
- **Overview of CompTIA Apprenticeships for Tech**
- **Review of Appendix A**
- **Apprenticeship models for tech occupations**
- **Imbedded certification in programs**
- **Competency updates and validation**
- **Questions, brainstorming and next steps**

Purpose of Today's Session

To provide the Florida navigators and other CareerSource team members the “tools” to be able to help companies, colleges, nonprofits and workforce centers easily start tech apprenticeship programs working as a partner with CompTIA and Maher & Maher.

Learning Objectives

1. Identify the resources and support that will be provided by CompTIA to assist you in starting apprenticeships programs in tech occupations.
2. Become familiar with the most in demand entry level tech programs in major MSA's in Florida and the U.S.
3. Understand the difference of a “national program” and “national guidelines”.
4. Be able to identify the elements that can be modified in the Attachment A to meet the needs of a particular company or group of companies.
5. Discuss models of apprenticeships that will fit well with tech roles and why.
6. Learn how the duties and tasks or competencies listed in the work processes are updated and validated.

Introductions



The Computing Technology Industry Association (CompTIA) is a leading voice and advocate for the \$5.2 trillion global information technology ecosystem; and the estimated 75 million industry and tech professionals who design, implement, manage, and safeguard the technology that powers the world's economy.



Maher & Maher, a wholly owned affiliate of the American Institutes for Research® (AIR®), is a talent development firm that helps organizations view their work through the eye of their “customer.” We partner with our clients in identifying ways to improve workflows, align resources, and develop people to excel at fulfilling the needs of the customers they serve.

Introductions

Presenters

Participants

- Name
- Previous experience with apprenticeship
- Which CareerSource Center do you represent or your role in the CareerSource system?
- What are you most hoping to get out of today?

Why Registered Apprenticeships?

- High-quality career pathway
- Signal of quality
- Proven solution
- Enhances employer reputation

94% of apprentices who complete an apprenticeship program retain employment, with an average annual salary of **\$70,000 apprentices**

Why Tech, Why Now?

The **skills gap has deepened equity and income gaps**, the health crisis further expanded the critical **need for digital competencies** for everyone and accelerated the need for tech workers in every industry.

- The tech workforce is **not diverse**.
- The **confidence gap** of individuals, especially women and people of color, causes them to believe that they do not have what it takes to succeed in tech careers.
- Many **tech careers do not require a degree**, but the right training and experience can lay the foundation for a degree should an individual desire that.
- There are **8.0M** tech workers in the U.S. (Cyberstates 2021)
- **47%** of tech jobs are in IT companies, **53%** are in other industries.

Why Registered Apprenticeship in Tech?

- **Tight** tech labor market
- Versatile program for both **new talent and upskilling** current workers
- Broadens the aperture for **untapped talent**
- Enables the actualization of **diversity, equity and inclusion** priorities
- **Existing pipeline** of candidates seeking opportunities in tech
- Apprenticeship co-exists within a **portfolio** of talent development programs
- Yields a **positive return on investment**

ROI Comparison: Work Based Learning Options

	Apprenticeship	Internship	Co-op
Active Enrollment in a Degree Pathway Required	NO	YES	YES
Average Length	12-24 months	3 months (1-2 rotations)	6 months (2-3 rotations)
New Hire Conversion Rate	91%	46%	28%
Retention Rate after 1 year	91%	70.6%	47.3%
Talent Acquisitions Cost (campus recruiting, sign-on bonuses, housing, relocation, etc.)	\$	\$\$\$	\$\$\$
Talent Supply Chain	Universities, Community Colleges, Bootcamps, Veterans, Career, Re-Inventors, Returnships, Incumbent Workforce, High Schools, NGO's	Universities	Universities
Federal Training and Wage Offsets	YES	NO	NO
Rate of Diverse Hires	41.8%**	While diversity hiring data is unavailable, according to NACE Trends and Predictions, 81% of employers have diversity recruiting efforts.	

*Source: 2018 Internship & Co-op Survey, National Association of Colleges and Employers

**Source: 2016 Urban Institute report on all RAPIDS states illustrates people of color

***Source: 2020 [Advancing Tech Apprenticeships: A guide to how apprenticeship is a future of work solution to create certainty in uncertain times](#)

The Goal of CompTIA Apprenticeships for Tech

To help close the digital skills gap to build a strong tech talent pool of workers to help organizations, industries, individuals and communities thrive.

Our strong focus on diversity, equity and inclusion will open new talent pools for businesses and offer new opportunities for entry and upskilling into tech roles that many individuals do not have the confidence nor access to pursue currently.

Maher & Maher and CompTIA formed a partnership to address this shared goal, now we are seeking like-minded organizations to partner with us.



Why Partner With Us?

- CompTIA's deep **expertise in IT training and certifications**
- Maher's expertise in **consultive services that enhance program success and sustainability**
- USDOL approved **National Guideline Standards (NGS)** simplifies the process and ensures success
- Support with **registering programs** in states in partnership with state apprenticeship offices
- Facilitated **connections to state and local resources**
- Help with **recruiting and placing apprentices**

Who can be a partner?

We seek organizations that share the same vision of expanding tech talent by developing new registered apprenticeships for tech occupations.

- **Employers** across industries seeking a sustainable solution for a diverse talent pipeline of IT/tech workers.
- **Education and Training Providers** desiring to work with employers to build a robust pool of tech talent.
- **Workforce Providers** supporting recruitment and career preparation for job seekers for tech careers.
- **Non-profit and Philanthropic Organizations** helping their clients who aim to enter tech careers.

Distinguishing Factors of Registered Apprenticeship

Apprenticeships are **jobs!** Apprentices are paid by their employers

Apprenticeship programs provide **on-the-job learning** and job-related **technical instruction**

Training results in an industry-recognized and nationally portable **credential**

On-the-job learning is conducted in the work setting under the direction of a **mentor(s)**

Apprenticeship programs offer numerous benefits for **businesses, career seekers and society.**

Benefits to Business

- Recruit and develop a diverse and highly-skilled workforce that helps you grow your business
- Immediate pool of workers today and skilled talent tomorrow
- Improve productivity, profitability and your bottom line
- Create flexible training options that ensure workers develop the right skills
- Timely training in specific skills and knowledge, that meets the business need and keeps pace with industry changes



Benefits to Career Seekers

- Earn while learning
- Reduces educational debt
- Recognized credentials
- Increases value on the job market
- Gain workplace-relevant skills in occupations in high-demand
- Create a foundation for a career path, not just a job



Benefits to Society

- Multiple advanced education models
- Reduces cost of education
- Reduces need and cost of retraining
- Closes the skills gap
- Access to the middle class for all



Our Approach

Tech Occupations in Every Industry

- **8 million** employed in tech occupations in 2020, and U.S. Bureau of Labor Statistics projects **9 million by 2030**.
- There were **247,418 net job postings** in 2020.
- Tech job growth is projected to **increase by 15%** by 2028.
- The **importance of tech roles** in businesses of every size and type in every industry will continue to grow into the future.
- Focusing on tech roles in **every industry** rather than only IT companies will provide a stable and transferable career path for apprentices.
- Conducting outreach to multiple industries will **increase the tech opportunities** to diverse talent pools that might otherwise shy away from or lack access to IT careers.

National Guideline Standards (NGS)

- CompTIA has **extensive knowledge** in developing and maintaining certifications and curriculum, to establish NGS approved by the U.S. DOL.
- CompTIA is responsible for keeping the National Guideline Standards **fresh and relevant** to future changes in these occupations.
- NGS **defines competencies, related technical training, program policies** to streamline program registration with the federal office or state apprenticeship offices.
- NGS are designed to be **customizable** to meet the specific needs of employers, and to empower collaboration with state and local partners rather than competition.
- NGS are **stackable** and allow the employer to optimize the structure of on-the-job training and technical instruction.

Tech Occupation Highlights

Tech Support Specialist

- Total job postings in 2020: **263,123**
- Average Starting Salary: **\$39,000**
- Median Salary: **\$42,700**

Networking Support Specialist

- Total job postings in 2020: **21,308**
- Average Starting Salary: **\$49,800**
- Median Salary: **\$61,300**

Cybersecurity Support Technician

- Total job postings in 2020: **8,919**
- Average Starting Salary: **\$78,200**
- Median Salary: **\$83,200**

IT Project Manager

- Total job postings in 2020: **185,556**
- Average Starting Salary: **\$86,900**
- Median Salary: **\$104,900**

Source: CompTIA analysis of Burning Glass Labor Insights data

Flexible, Competency-Based Programs



CompTIA Apprenticeships for Tech are:

- **Flexible** programs that are customized to meet the need of each employer. We will work with you to use CompTIA's NGS to build a program that is ideal for you.
- **Competency-based**, not time-based programs, so apprentices advance as they achieve competency. NGS are built around a one-year program for the average apprentice.
- **Designed to best fit** the needs of an employer or a group of employers with a group sponsor, front-loaded and blended learning are options.

CompTIA's Authorized Partner Program



- CompTIA has proven **curriculum and learning resources** to help academic institutions, training organizations prepare learners for CompTIA certifications.
- CompTIA collaborates with partners to **attract future learners** and provide them with the necessary tools to pursue a successful career in Tech.
- CompTIA Apprenticeships for Tech will leverage this vast **network of training partners** to help each sponsor / employer identify the right technical training partner for their needs.
- We strive to work with **local training partners** whenever possible and can also leverage CompTIA's **online training and customized training** when a local partner is not available or in partnership.

Commitment to Diversity

50% of all apprentices placed with support from this initiative must be from diverse populations, including but not limited to:

- People of Color
- Women
- People with Disabilities

This initiative goal aligns with our corporate goals and we seek partners who also **share a commitment to diversity**.

We are building a network of partners to help provide a qualified talent pipeline through pre-apprenticeships and other feeder programs.

Things to Consider

- When considering what occupations would be the best for you consider those that are **hard to fill, do not require a degree to get started** (a degree can be earned later to advance in the career), and where employers seek a **diverse workforce**.
- Connections to training providers for the related technical instruction (RTI), **CompTIA provides curriculum** that aligns to the certifications within the NGS occupations. We can **connect employers to a large network of authorized training partners** and help local entities become an authorized training partner.
- This initiative can partner with all apprenticeship grantees of the United States Department of Labor with co-enrollment of apprentices, which means that rather than competing **we are working with states and local partners to expand tech apprenticeships** across the United States.

Overview Questions and Discussion



We are excited to partner to expand registered apprenticeship in tech roles across Florida?

How can CompTIA and Maher help CareerSource reach your goals?

Before we move on into details of the NGS and building programs, what questions do you have?

GOING DEEPER

CompTIA Apprenticeship for Tech Solution



- 1 National Guideline Standards for key tech occupations
- 2 Services Enabling Program Development and Support
- 3 Classroom-Based Training (RTI) - Direct from CompTIA \$ or Indirect through CompTIA Authorized Partners
- 4 Official CompTIA content and certifications – “Apprenticeship Bundles” \$

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National Guideline Standards for the following tech occupations:

- TECH SUPPORT SPECIALIST (approved)



- NETWORK SUPPORT SPECIALIST (approved)



- CYBERSECURITY SUPPORT TECHNICIAN (approved)



- IT PROJECT MANAGEMENT * (coming soon)



WORK PROCESS SCHEDULE CYBERSECURITY SUPPORT TECHNICIAN

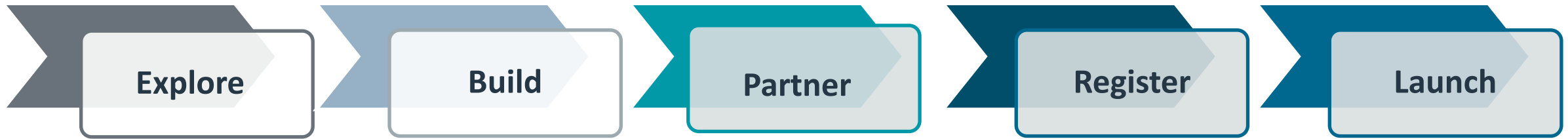
O*NET-SOC CODE: 15-1212.00 RAPIDS CODE: 2050CB

Description: Cybersecurity support technicians detect cyber threats and implement changes to protect an organization. A Security Operations Center (SOC) team typically has several tiers of cybersecurity professionals who are responsible for monitoring, directing, containing, and remediating IT threats. Cybersecurity professionals may be tasked with anything from installing, administering, and troubleshooting security solutions to creating security policies and training documents for colleagues. While other IT job roles are responsible for specific parts of the overall system, cybersecurity professionals must be able to take a step back in order to see the big picture and keep every aspect of the system secure from threats. They may progress in their knowledge and training to become security analysts, cloud security engineers, threat hunters, penetration testers, and compliance managers.

Work Duties (Required Competencies)		Competent (Y/N)
Part 1 – Basic Hardware		
1	Demonstrate knowledge of various mobile device types, their features, and purpose.	
2	Demonstrate skills required to manage and troubleshoot computer hardware and peripheral devices.	
3	Demonstrate knowledge of common computer hardware and interfaces.	
4	Demonstrate skills required to troubleshoot general computer hardware issues and printer problems.	
5	Demonstrate skills required to configure peripherals, printers, and related applications to support external hardware.	
Part 2 – Basic Networking		
6	Demonstrate knowledge of basic networking concepts (wired and wireless).	
7	Demonstrate skills required to configure and troubleshoot device connectivity (LAN and Internet Access).	
Part 3 – Cloud and Virtualization Technologies		
8	Demonstrate knowledge of cloud computing concepts, including cloud storage and security configurations.	
9	Demonstrate skills required to configure client-side virtualization, cloud storage applications and file synchronization features.	

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Services Enabling Program Development Support



Get to know apprenticeship, it's benefits and how different employers and sponsors are creating programs across industry and geography.

Understand your options, the steps involved in building an apprenticeship program and tools we offer to get you started.

Collaborate with apprenticeship representatives, workforce organizations and educators to build the program.

Take advantage of benefits such as funding opportunities, tax credits and no-cost technical assistance when you register your program.

Recruit prospective apprentices, measure and monitor your program and share your success.

3 Classroom-based Training


Direct through CompTIA

- Live Online Training Courses
- Custom Training

Indirect through a CompTIA Authorized Partner

- Academic Institution
 - Youth Apprenticeships (High School)
 - Workforce Program (Community College)
- Delivery Training Partner

4 CompTIA Apprenticeship for Tech

Bundle Options	
A+ Core 1	Learn + Practice
	Learn + Voucher
	Learn + Practice + Voucher
	<ul style="list-style-type: none">➤ Tech Support Specialist➤ Network Support Specialist➤ Cybersecurity Support Technician

CompTIA Apprenticeships for Tech will help you...

Create	Create more value for employers, partners and jobseekers
Expand	Expand the portfolio of training and talent solutions in your communities
Increase	Increase the number of skilled tech workers
Attract	Attract new business and new employers, to your workforce areas and partnerships.
Enable	Enable organizations to reach their diverse tech talent pipeline goals

Explore Appendix A

Apprenticeship models that are a good fit with tech occupations

Front loaded models supply industry with workers more quickly in a rapidly changing technology field (Bootcamp models popular)

Segmented model produces similar results with time in training and periods of on-the-job training. (Similar to college Co-op programs).

The value of the imbedded certification in programs

- Quality Control - instructors must teach to a consistent standard exam pass rate reflects their teaching
- Many job ads list the actual certification as a preference for hiring
- Students achieve a credential for their resume
- Some agencies suggest/require a certification to receive funding

How competencies are updated and validated

- Periodically there will be SME's from across the world apply to become contributors
- Job task analysis workshop is conducted to determine duties & tasks by a defined target audience
- SME develops exam objectives
- Draft exam objectives distributed globally to ensure validated skills
- New exams released every three years

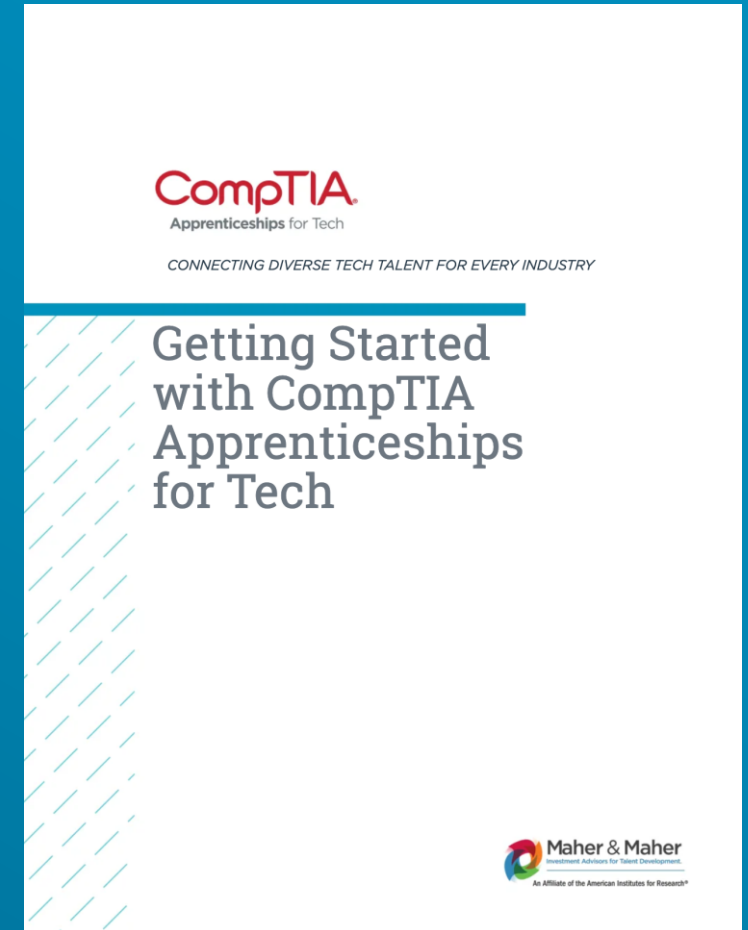
Questions and Discussion



Additional questions, thoughts?

Our Resources

- [CompTIA Apprenticeships for Tech Website](#)
- [National Guideline Standards Getting Started Guide](#)
- [Initiative Flyer](#)
- Partner with us and let us streamline the work to create your own program, join an existing program or collaborate with partners to expand and grow tech apprenticeships.



Additional Resources

There are many resources available to support the development and registration of your program, here are a few to get you started:

- www.apprenticeship.gov
- [A Quick-Start Toolkit: Building Registered Apprenticeship Programs](#), USDOL
- [Starting a Registered Apprenticeship Program](#), Urban Institute, 2017
- [Apprenticeship Finder to Post Openings or Look for Opportunities](#)
- [Apprenticeship Equal Employment Opportunity Website](#)

Partner with us and let us streamline the work to create your own program, join an existing program or collaborate with partners to expand and grow tech apprenticeships.

THANK YOU FOR YOUR TIME!

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