



# Building OJL standards for depth, breadth, and flexibility

Lessons from building apprenticeship tracking in new industries

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2019 MEATA Spring Apprenticeship Conference  
May 24, 2019

Not an intermediary.

Not an educational provider.

Not a workforce organization.

Not a government entity.

Not an employer with apprentices... yet.

We live for apprenticeships.

**Unique perspective**

# CEO of WorkHands

Grew up around trades

Builds software

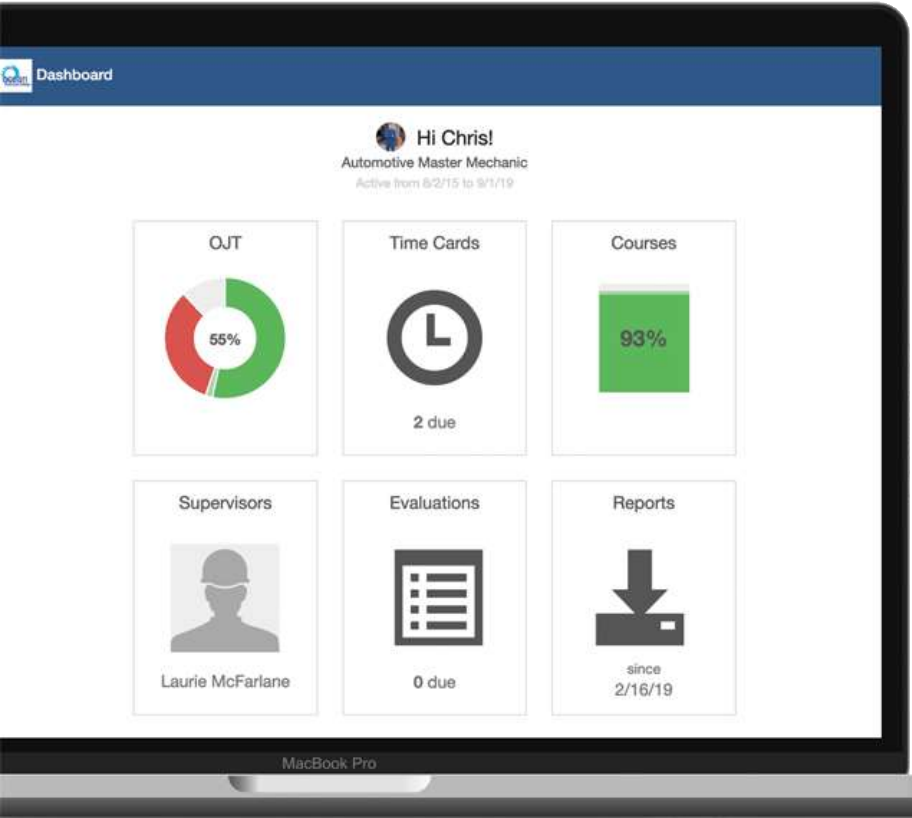
Marrying those two ideas



**Patrick Cushing** [patrick@workhands.us](mailto:patrick@workhands.us)

WorkHands allows you to manage your apprenticeship from anywhere.

**What we do**



# WorkHands snapshot

20+ apprenticeship programs in 5 states

Construction to IT + healthcare

Sole sponsors, union, community college,  
workforce development.

We talk to 100s of programs nationwide annually.

**Apprenticeship experience**

Employers

On-the-job (OJT) training

Related instruction

Credentials

Wage schedule

- JFF

**Apprenticeship standards overview**

Employers

**On-the-job (OJT) training**

Related instruction

Credentials

Wage schedule

**Just talking about OJT today**



Hours vs competencies

Time spent vs ability to do the job

**OJT – hours? competencies? both?**

Breadth

Depth

Flexibility

**Demystify OJT with a few examples**

**Hours-based**

# Machinist

~8-10 Work Processes

- Bay Area IAM (now AMTAC)

**Typical hours**

Automotive Apprent...  
Admin

Occupations

Dashboard

Apprentices

Time Cards

Courses

Supervisors

Admins

Occupations

Reports

Program Settings

Support

Search by name

Automotive Body and  
San Francisco Automotive  
4.7 active apprentices

Automotive Body and  
East Bay Automotive JAC  
4.7 active apprentices

Automotive Master M  
San Francisco Automotive  
4.0 active apprentices

Automotive Master M  
East Bay Automotive JAC  
4.0 active apprentices

Automotive Master M  
Central Valley Automotive  
4.14 active apprentices

Automotive Painter  
San Francisco Automotive

Automotive Painter  
East Bay Automotive JAC

## Work processes

<b>Preliminary</b> assisting to acquire names and uses of hand tools, auxiliary machine tools and precision measurements	300 hours
A <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Drill press</b> sensitive, heavy duty and radial	500 hours
B <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Engine lathe</b> bench, small and heavy floor type	1000 hours
C <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Turret machine</b>	400 hours
D <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Band saw</b>	400 hours
E <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Tool crib</b> making, sharpening and cleaning tools	300 hours
F <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Milling machine</b> universal and vertical	1000 hours
G <a href="#">Edit</a> <a href="#">Delete</a>	
<b>Grinders</b> horizontal and vertical	700 hours
H <a href="#">Edit</a> <a href="#">Delete</a>	

FAQ [See all](#)

[Apprentices](#)

[Supervisors](#)

[Administrators](#)

[General](#)

# Typical hours

# Roofer

## 3 Work Processes

- Bay Area Roofing & Waterproofing

**Least specific, most flexible hours**

Bay Area Roofing & Waterproofer Admin Occupations

Dashboard  
Apprentices  
Time Cards  
Supervisors  
Admins  
Occupations  
Reports  
Program Settings  
Support

Search by name

**Roofer and Waterproofer**  
Bay Area Roofing & Waterproofer  
642 active apprentices

Editing is disabled because this occupation has 642 active apprentices

Name  
Roofer and Waterproofer

Apprenticeship duration (in years)  
4

Work processes

Process	Description	Hours
A	<b>Preparation</b> Loading, unloading, cleaning, tear-off activities.	800 hours
B	<b>Application</b> Any application of Roofing and/or Waterproofing material or products.	2400 hours
C	<b>Miscellaneous</b> Maintenance and/or repairs of Roofing and/or Waterproofing, driving, warehouse work, etc.	800 hours
D	<b>Training</b> Any hours of attendance at the Training Facility in Livermore.	

FAQ See all  
Apprentices  
Supervisors  
Administrators  
General

Least specific, most flexible hours

Bay Area Roofing &... Admin

Time Cards

April 2019 submitted

Apprentice

Supervisor

**Marcus Valencia**  
Roofer and Waterproofer  
All paid time cards

**Daniel Smith**  
Admin  
Bay Area Roofing & Waterproofing  
Apprenticing

Hours 142 hours

Preparation	30
Application	60
Miscellaneous	20
Training	32

[Add a comment](#)

Save

Dashboard

Apprentices

Time Cards

Supervisors

Admins

Occupations

Reports

Program Settings

Support

Search by name

Filters 4-M 2019

Status - Month

Salvador Pedraza  
April 17, 2019 to April 17, 2019  
Daniel Smith

Estevan Maciel  
April 2, 2019 to April 2, 2019  
Daniel Smith

Damian Maya  
April 2, 2019 to April 2, 2019  
Daniel Smith

Victor Rodriguez  
April 2019  
Daniel Smith

Marcus Valencia  
April 2019  
Daniel Smith

Bernardo Rayon  
April 2019  
Daniel Smith

GJT May Schedule

- 5th OJT first notice
- 7th OJT reminders sent
- 30th Reminders sent to supervisors
- 10th OJT officially due
- 13th Outstanding OJT sent to supervisors
- 15th OJT overdue
- 16th OJT reports generated

FAQ See all

Apprentices

Supervisors

Administrators

General

Least specific, most flexible hours



**Competency-based**

# Cybersecurity

Around 100 skills, 10 per work process

- City College of San Francisco

**Typical competencies**

City College of San Francisco Admin

Reviews

Skills 8/8

Assists in developing security policies and protocols; assists in enforcing company compliance with network security policies and protocols  
8 of 8 skills completed

- Basic—Locates (in internet, employee handbook or security protocols) organizational policies intended to maintain security and minimize risk and explains their use
- Advanced—Provides guidance to employees on how to access networks, set passwords, reduce security threats and provide defensive measures associated with searches, software downloads, email, internet, anti-virus, software coding and transferred files
- Basic—Ensures that password characteristics are explained and enforced and that updates are required and enforced based on appropriate time intervals
- Advanced - Assigns individuals to the appropriate permission or access level to control access to certain web IP addresses, information and the ability to download programs and transfer data to various locations
- Intermediate - Assists employees in the use of technologies that restrict or allow for remote access to the organization's information technology network
- Advanced - Develops security compliance policies and protocols for external services (i.e. Cloud service providers, software services, external data centers)
- Advanced—Complies with incident response and handling methodologies
- Intermediate—Articulates the business need or mission of the organization as it pertains to the use of IT systems and the storage of sensitive data
- Intermediate—Explains organization policies for the storage, use and transfer of sensitive data, including IP and personally identifiable information, identifies data life cycle, storage facilities, technologies and describes business continuity risks

Provides technical support to users or customers  
7 of 8 skills completed

- Advanced - Implements security measures for uses in system and ensures that system

FAQ See all

Apprentices

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General

# Typical competencies

# Machinist

238 Competencies

- Workforce Intelligence Network (WIN)

**Competencies exhaustive**

The screenshot displays a software interface with a dark blue header and a light grey sidebar. The sidebar contains a navigation menu with the following items: Dashboard, Apprentices, Time Cards, Courses, Supervisors, Admins, Evaluations, Occupations, Reports, Program Settings, and Support. The main content area is divided into three sections. The top section is a search bar with the text 'Search by name'. Below it is a list of competencies, each with a title, a 'Workforce Intelligence' logo, and a '1 active apprentice' indicator. The competencies listed are: Apprenticeship Administration, Business Partnership, Career Development, CNC Set-up Program - Mechanical, Die Maker, Direct Support Professional, and Electrician. The bottom section is a detailed view of the 'Basic Mechanical Power Transmissions' competency, which is highlighted with a blue header and a '51 skills' badge. The skills listed under this competency are: Industrial Cams - Identify the common types of cam followers and rod ends; Industrial Cams - Identify industrial cam followers and functions; Gear Drives - Assemble - A parallel shaft gear drive, - A worm and wheel gearbox drive unit, - An angle shaft gear drive; Gear Drives - Explain gear ratings and application; Gear Drives - Identify and describe associated seals, breathers, and lubrication; Industrial Cams - Replace, install, and adjust cam followers and rod ends; Gear Drives - Identify and describe gear drive functions and uses; Industrial Cams - Identify industrial cam follower bushing types and operating clearances; Clutches and Brakes - Install a clutch/brake assembly; Gear Drives - Recognize and explain gear identification; Clutches and Brakes - Perform clutch and brake identification and visual inspection; Gear Drives - Identify and describe open gears and enclosed gears; Clutches and Brakes - Identify mechanical-lockup interfaces and actuation methods; Clutches and Brakes - Identify friction and electromagnetic types of clutches; Clutches and Brakes - Identify clutch and brake functions and uses; Mechanical Drives - Inspect for sprocket wear; Mechanical Drives - Install chain guards; Mechanical Drives - Properly perform alignment and chain tension; Mechanical Drives - Identify and describe silent chain drives.

Competencies exhaustive

**Hybrid**

# Medical Assistant

8 Work Process + 100+ Competencies

- SEIU program in Washington (pre-launch)

**Hybrid**

The screenshot displays a software interface for tracking hours and OJT progress. The main window is titled "April 2019" and shows a list of tasks with progress indicators and a total hours counter. The tasks are:

- Communicate and Interact Effectively to Provide Quality Patient Care: 0
- Office Management and Administrative Tasks: 0
- Coordinate and Schedule Appointments: 0
- Assist with and Perform Authorized Medical, Laboratory, and Clinical Procedures: 1
- Maintain Clinical Safety and Environmental Standards: 0
- Participate in Ongoing Quality Improvement Processes: 0
- Communicate Effectively with Clinical Care Team: 0

A red circle with the number "1" indicates the total hours tracked. The sidebar on the right lists OJT milestones:

- OJT May Schedule
- OJT first notice
- OJT reminders sent
- Reminders sent to supervisors
- OJT officially due
- Outstanding OJT sent to supervisors
- OJT overdue
- OJT reports generated
- FAQ See at
- Apprentices
- Supervisors
- Administrators
- General

# Track hours



The screenshot displays a software interface for managing healthcare apprenticeships. On the left is a navigation menu with items: Dashboard, Apprentices, Time Cards, Courses, Supervisors, Admins, Evaluations, Occupations, Reports, Program Settings, and Support. The main area shows a 'Skill review (January 2019)' window. At the top right of this window is a green 'approved' button. Below the title, there are two columns: 'Apprentice' with 'Example Apprentice' (Medical Assistant DEMO) and 'Supervisor' with 'Mark Demosupervisor'. A 'Skills' section shows a progress indicator of 1/5 skills completed. The skills listed are: 'Communicate and Interact Effectively to Provide Quality ...' (0 of 0 skills completed), 'Office Management and Administrative Tasks' (1 of 3 skills completed), 'Coordinate and Schedule Appointments' (0 of 0 skills completed), and 'Assist with and Perform Authorized Medical, Laboratory, and Clinical Procedures' (0 of 3 skills completed). Under the last skill, there are three unchecked checkboxes: 'Perform patient screening using established protocols', 'Measure and record temperature orally', and 'Measure and record blood pressure'. The bottom of the window shows the start of 'Maintain Clinical Safety and Environmental Standards'.

...and competencies

- Dashboard
- Apprentices
- Time Cards
- Courses
- Supervisors
- Instructors
- Evaluations
- Occupations
- Reports
- Program Settings
- Support

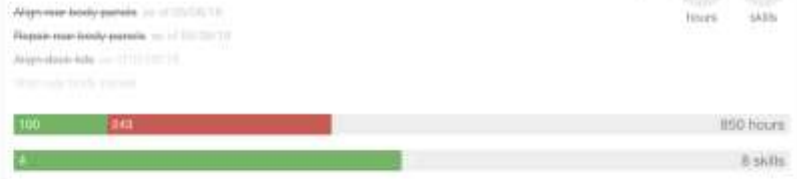
## 28% - almost halfway

1 year remaining to complete 4,680 hours and 19 skills



- FAQ See all
- Apprentices
- Supervisors
- Administrators
- General

### Repair and align deck lids and rear body panels



### Repair and align turret tops and door posts



### Frame and unit body alignment plus remove and repair suspension



# Hybrid OJT Progress

Months-based OJL!

Workers Compensation Adjudicator 2 for

- WA State Department of Labor & Industries

**Wildcard\***

**WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES/CLASSIFIED  
EMPLOYEES JOINT APPRENTICESHIP AND TRAINING COMMITTEE**

<b><u>B. Workers' Compensation Adjudicator 2</u></b>	<b><u>Approximate Months</u></b>
1. Introduction to L & I and Claims Administration.....	03.25 Months
2. Claim Validity .....	03.67 Months
3. Wage Rate and Entitlement to Wage Loss Benefits .....	03.93 Months
4. Medical Management .....	03.95 Months
5. Vocational Rehabilitation .....	03.42 Months
6. Claim Resolution.....	03.78 Months
<b>TOTAL</b>	<b>22.00 MONTHS</b>

**Months-based standards**

**How to build in flexibility**

- Dashboard
- Apprentices
- Time Cards
- Courses
- Supervisors
- Admins
- Evaluations
- Occupations**
- Reports
- Program Settings
- Support

### Support Specialist



#### Computer Support Specialist (Desktop Support Technician) - Cohort 1

SLO Partners Apprenticeship, 15-1151.01  
# 16 active apprentices



#### Computer Support Specialist (IT)

SLO Partners Apprenticeship, 15-1151.00  
# 7 active apprentices



- FAQ See all
- Apprentices
  - Supervisors
  - Administrators
  - General

Expect to update after 1<sup>st</sup> cohort

- Dashboard
- Apprentices
- Time Cards
- Courses
- Supervisors
- Admins
- Evaluations
- Occupations
- Reports
- Program Settings
- Support

Workforce Development +

Occupation	Courses	Skills	Hours
<b>Apprenticeship Administrator – Workforce Development Specialist</b> Workforce Intelligence Network (WIN) 1 active apprentice	7	163	2000
<b>Business Partnerships Coordinator - Workforce Development Specialist</b> Workforce Intelligence Network (WIN) 4 active apprentices	7	109	2000
<b>Implementation Coordinator - Workforce Development Specialist</b> Workforce Intelligence Network (WIN) 3 active apprentices	7	105	2000
<b>Program Assistant - Workforce Development Specialist</b> Workforce Intelligence Network (WIN) 3 active apprentices	7	154	2000
<b>Research Assistant - Workforce Development Specialist</b> Workforce Intelligence Network (WIN) 1 active apprentice	7	132	2000

FAQ See all

Apprentices

Supervisors

Administrators

General

Specific occupations from exhaustive list

California Cybersec...  
Admin

- Dashboard
- Apprentices
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network.

Analyze identified malicious activity to determine weaknesses exploited, exploitation methods, effects on system and information.  Required hours 100

Identify and analyze anomalies in network traffic using metadata.  Required hours 100

Identify applications and operating systems of a network device based on network traffic.  Required hours 0  Hidden

Identify network mapping and operating system (OS) fingerprinting activities.  Required hours 0  Hidden

Implement security measures to resolve vulnerabilities, mitigate risks, and recommend security changes to system or system components as needed.  Required hours 0  Hide

Implement system security measures in accordance with established procedures to ensure confidentiality, integrity, availability, authentication, and non-repudiation.  Required hours 0  Hide

Courses

Reports

# Customize per apprentice



The screenshot displays a user interface for a competency management system. On the left is a navigation menu with items like Dashboard, Apprentices, Time Cards, Courses, Supervisors, Admins, Evaluations, Occupations, Reports, Program Settings, and Support. The main content area is titled 'Skills' and shows a progress indicator of 40/82 skills. The first skill listed is 'Assists in developing security policies and protocols; assists in enforcing company compliance with network security policies and protocols', with 6 of 9 skills completed. Below this skill is a list of proficiency levels with checkboxes: Basic (checked), Advanced (checked), Basic (checked), Advanced (unchecked), Intermediate (unchecked), Advanced (unchecked), Advanced (checked), Intermediate (checked), and Intermediate (checked). The second skill listed is 'Provides technical support to users or customers', with 7 of 8 skills completed. Below this skill is a list of proficiency levels: Advanced (unchecked).

# Competencies yes/no

The screenshot displays a Skills Management System interface. On the left is a navigation menu with items: Dashboard, Apprentices, Time Cards, Courses, Supervisors, Admins, Evaluations, Occupations, Reports, Program Settings, and Support. The main content area is titled 'Skills' and shows a list of competencies under the heading 'Project Management and Coordination'. A search bar at the top right shows '30 skills'. A dropdown menu is open over the 'Not started' status of the first competency, showing options: 'Not started', 'Beginner', 'Intermediate', and 'Advanced' (which is selected with a blue checkmark). The competency list includes:

- Not started** - Draft a funding proposal and, paying close mind to version control, seek feedback and input from colleagues and partners as appropriate.
- Not started** - Develop a proposal outline based on a given funding opportunity announcement or RFP/RFQ. Be sure to address key deliverables and desired outcomes found in the RFP.
- Not started** - Research and find grant funding sources relevant to the organization's strategic plan. Demonstrate ability to locate sources for grants on various websites and identify those relevant to the organization.
- Not started** - Identify possible partners on grant proposals and clearly define proposed roles and responsibilities of each.
- Not started** - Read and interpret an RFP/RFQ to determine desired deliverables and outcomes, and determine whether a proposal is appropriate.
- Not started** - Flag and escalate issues with meeting project deadlines and milestones, and enact alternative approaches to achieving milestones as needed, e.g. re-assigning tasks, escalation to supervisor level, or adjusting the project plan.
- Not started** - Use spreadsheet software or project management software to create and consistently maintain clear and concise project plans. Include milestones, the constraints, and task owners.
- Advanced** - Demonstrate appropriate etiquette when communicating with different types of colleagues and on varied communication platforms (email, phone, in-person, instant message, etc.) in accordance with a provided style guide (if applicable).
- Advanced** - Use effective communication management to maintain relationships with partners, and to effectively collaborate with internal and external colleagues.
- Advanced** - Use effective time management techniques to meet deadlines for all given tasks or projects, and communicate with supervisors regarding challenges meeting deadlines on numerous...

On the right side of the interface, there is a sidebar menu with categories: FAQ Base of, Apprentices, Supervisors, Administrators, and General.

# Competencies levels

**In conclusion**

Many ways to get breadth/depth

Make an exhaustive list of work processes + skills

...or stay high-level

Expect revisions after the first cohort

Build in role and employer customization

Don't be afraid to break the mold (months-based!)

**There is no one way**

Thank you!

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