

Toolkit: A Framework for Understanding Frameworks

Lessons Learned from Direct Assessment CBE & Creating a Portal

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The Continuum of Framework Adoption

Created 7 SACSCOC-approved, direct assessment, CBE programs, then pushed them up to a free, online portal at knowledgetowork.com w/personalized learning plans using competencies tied to OER

- Review & adopt
- Strongly align
- Informed by
- Build from scratch
- Overlap for partial use
- Hybrid

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What is Knowledge to Work?

Knowledge to Work promotes competency-based education, helping users document the competencies (skills) they already know and learn new ones using free or low-cost learning resources. [Start searching now!](#)

Who are you?

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We help you learn and put your knowledge to work.

 27,947 RECENT SEARCHES	 20,579 LEARNING RESOURCES	 491 COMPETENCIES TO LEARN	 611 COMPETENCIES ATTAINED
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Plus, there are 385 competencies being worked on.

Personalized Learning Plan Summary

 64.3% Complete 0% 100%	 16% Complete 0% 100%	 13 Achieved 0 39
AHIMA Foundation Health Information Management Data Analyst	My Dream Job	Total Competencies (Showing All Credentials & Custom Goals)
Total Competencies: 14	Total Competencies: 25	Total Competencies: 39
Competencies Achieved: 9	Competencies Achieved: 4	Total Achieved: 13
% Complete Overall: 64.3%	% Complete Overall: 16.0%	Total Remaining: 26
Estimated Completion: October 06, 2017*	Estimated Completion: November 24, 2017*	WORK ON ALL
WORK ON THIS	WORK ON THIS	Show Information Below

Favorited Resources (5 Most Recent)

Date Favorited	Learning Resource (Click To View)
08/16/2017	Introduction To Anatomy Physiology : Anatomy Terms
08/16/2017	Cell Biology For Anatomy and Physiology : Introduction Cell Biology and Cell Theory
07/09/2017	Excel 2016 Tutorial Part 15: How to Use the Flash Fill Feature in Excel 2016
06/22/2017	Taking Coding to the Next Level through Clinical Validation
11/29/2016	Medical Billing and Coding Online

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User Learning Plan - Clicking Competency Loads Search

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Knowledge To Work Competency-Based Personalized Learning Plan

[Manage your credentials & custom goals](#)
[Toggle most recent activity panel](#)

LEARNING RESOURCE	LEARNING RESOURCE	COMPETENCY	COMPETENCY
Information Security : Introduction to Information Security <p>Read more on KnowledgeToWork.com Visit this Resource</p>	Network <p>Communication/Security/Authentication (ITN-262) Read more on KnowledgeToWork.com Visit this Resource</p>	Modify a system to improve data confidentiality or regulatory compliance. <p>Search resources related to this competency</p>	Demonstrate ability to apply basic rules of English grammar, especially spelling, punctuation, capitalization, and sentence construction. <p>Search resources related to this competency</p>

Competencies (Showing All Credentials & Custom Goals)

Filter Showing All Sort By Default Show 10 [Refresh Page](#)

Due Date	Achieved	Competency Domain	Competency Name (Click to search associated Resources)
09/15/2017	<input checked="" type="checkbox"/>	Access & Authentication	Differentiate between public and private data. (7)
09/19/2017	<input checked="" type="checkbox"/>	Access & Authentication	Explain the process of authentication and authorization between end user devices and computing network resources. (78)
09/22/2017	<input checked="" type="checkbox"/>	Access & Authentication	Modify a system to improve data confidentiality or regulatory compliance. (21)
09/29/2017	<input checked="" type="checkbox"/>	Access & Authentication	Summarize the flow of data through a computer network scenario. (15)
03/22/2018	<input type="checkbox"/>	Access & Authentication	Use a variety of practices for making end user systems secure. (84)
03/23/2018	<input type="checkbox"/>	Access & Authentication	Use documentation or a knowledge base to resolve a technical challenge in an identified computing scenario. (8)
08/27/2017	<input checked="" type="checkbox"/>	Attacks & Crimes	Demonstrate professional behavior in response to an ethically challenging scenario in computing. (16)
08/29/2017	<input checked="" type="checkbox"/>	Attacks & Crimes	Describe the layers, protocols and components of the OSI model. (10)
09/01/2017	<input checked="" type="checkbox"/>	Attacks & Crimes	Summarize the flow of data through a computer network scenario. (11)
09/03/2017	<input checked="" type="checkbox"/>	Attacks & Crimes	Summarize the security implications and risks for distributed IT systems. (15)

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Showing 1-10 of 159 (1 of 16 Pages)

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Search a keyword above before refining your search results using the filter options below.
Total Results: 21 Learning Resources (3 pages)
 Advanced Filters not applied (You may apply Advanced Search Filters below) [Reset Search](#)

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- Subject** ▲
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 - Health Information Management (2)
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- Recognition Type** ▼
- Media Type** ▲
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 - Video (19)
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- Recognition Availability** ▼
- Accessibility Options** ○
- [Save Search & Filter \(optional\)](#) ▼

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Network Communication/Security/Authentication (ITN-262)

Provided By: Lord Fairfax Community College (LFCC)
 Covers an in-depth exploration of various communication protocols with a concentration on TCP/IP. Course content explores communication protocols from the point of view of the hacker in order to highlight protocol weaknesses. Course content includes Internet architecture, routing, addressing, topology, fragmentation and protocol analysis and the use of various utilities to explore TCP/IP. Prerequisites: Readiness to enroll in EN3 111 and ITN 260. Networking background highly recommended. Lecture 3 hours per week. Generally offered fall.

Creator: Lord Fairfax Community College (LFCC) Cost: Paid
 Resource Type: Course - on-site IT Competency Framework
 Recognition Type: College credit Resource Link [↗](#)

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Administering Windows Server 2012 (70-411)

Provided By: Udemy
 Administering Windows Server 2012 (70-411) Microsoft's server operating systems have powered business for over 20 years. In the beginning, it was all about connectivity in the local area network, now it's all about connectivity in the cloud. Microsoft calls Server 2012 "The Cloud OS" and is branding it as being "built from the cloud up." Their goal with this product is to deliver the power of many servers with the simplicity of one. Achieving a Microsoft Certification on this product is an excellent career move. In this VTC course, Mark Long brings 20+ years of experience with Microsoft technologies along to help you understand the features and functionalities of Windows Server 2012 from the standpoint of preparing for certification exam 70-411 Administering Microsoft Windows Se...

Resource Type: Course - online Cost: Paid
 Recognition Type: Certificate of completion Created: 10/01/2013
 IT Competency Framework
 Resource Link [↗](#)

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Information Security

Provided By: Saylor Academy
 Introduction to the fundamentals of information security, computer security technology and principles, access control mechanisms, cryptography algorithms, software security, physical security, and security management and risk assessment.

Creator: Saylor Academy Cost: Free
 Resource Type: Course - online IT Competency Framework
 Resource Link [↗](#)

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Deep dive into framework data structures

- Worked with [IMS Global CBE record data work group](#) & [C-BEN/TIP project](#)
- Reviewed [Common Education Data Standards](#) (CEDS) from model for State Longitudinal Data Systems (SLDS) from P20 to workforce
- Extensive review of USDOL efforts, including the [Competency Model Clearinghouse](#) & [O*NET](#) content model
- Developed new national framework & exam for [IT in healthcare w/AHIMA](#)
- Reviewed apprenticeship software CBE structures, [NCCER](#)
- Valued the [Ecosystem Competency Mapping](#) for [Credential Engine](#) w/ framework data structures, including CEDS, [CASE](#), [CTDL/Achievement Standards Network](#), [PESC](#), [HR Open Standards Consortium](#), [MedBiquitous](#), the Competency and Skills System ([CASS](#)), [Schema.org](#), and [IEEE](#), and [Ed Fi](#)
- Reviewed framework structures at [OECD](#), [UNESCO](#), Labor, [Education](#), [Commerce](#), [Defense](#), [NIH](#), and [OMB](#) for documenting competencies, along with mapping of military MOS by ACE to credit equivalencies
- Put in context w/other taxonomy/crosswalk efforts - CIP, SOC, & NAICS
- Reviewed Adelman/OERI work on [College Course Map](#) w/transcript analysis in longitudinal studies

Deep dive into framework data structures - 2

- Valued [Connecting Credentials Framework](#) vision for common language & unified framework for understanding competencies for credentials
- Two domains –
 - knowledge – breadth, depth, & dimension
 - skills – specialized, personal, & social
- Eight levels – adaptability, complexity, range, & selectivity
- Allows mapping of credentials according to common rubric or thesaurus about competencies, provides framework profile template
- Review of employability/soft skills/professional readiness frameworks such as [National Network of Business & Industry Associations](#), [P21 Partnership for 21st Century Learning](#), [Perkins Collaborative Resource Network](#), [CompTIA's Common IT Employability Skills](#), & state/system implementations such as Virginia Community College System's Soft Skills Task Force/Professional Readiness Competencies

USDOL – Competency Model Clearinghouse

- Nine tiers of competencies for an industry model, more specific as higher
- Foundation – tiers 1-3, personal effectiveness, academic, & workplace
- Industry – tiers 4-5, industry-wide technical & industry-sector technical
- Occupation – tiers 6-8 – knowledge areas, technical, & requirements
- Management – tier 9 (9 categories w/60 competency statements)
- Updated based on Dept. of Ed's Employability Skills Framework (Perkins) and National Network of Business & Industry Associations Common Employability Skills
- A model includes tiers, sectors, blocks, & key behaviors
- Process to build models is: (1) define industry; (2) identify key occupations; (3) analyze KSA using O*NET; (4) identify & catalog resources; & (5) align KSAs in resources to building blocks framework
- Tool for "[Build a Career Ladder/Lattice](#)" for vertical movement between jobs & lattices between vertical & lateral movement. Also includes [Collaboration tool](#) to promote organizational efforts to document ladders & lattices. A competency model must be created first.

Build a Model

thinkabout:

- [View Career Map Links](#) **NEW**
- [View Industry Models](#)
- [View Sample Career Ladders/Lattices](#)
- [Find Resources](#)

helpline:

General Instructions

- [Competency Model](#)
- [Career Ladder/Lattice](#)
- [Frequently Asked Questions](#)
- [Technical Assistance Guide](#)
- [A Guide for Developing Competency Models](#)

Collaborative Process

- [Build a Competency Model](#)
- [Build a Career Ladder/Lattice](#)

Tutorials

- [Build a Competency Model](#)
- [Build a Career Ladder/Lattice](#)
- [Webinar: Tools for Talent Development](#)

[Home](#) > [Build a Model](#) > Select Competencies

Welcome johnmilam

You are editing the model: John Test Model

[Main Menu](#) [Sign Out](#)



Getting Started



Select Model Framework



Tier 1
Personal Effectiveness Competencies



Tier 2
Academic Competencies



Tier 3
Workplace Competencies



Tier 4
Industry-Wide Technical Competencies



Tier 5
Industry-Sector Technical Competencies

Tier 1 - Personal Effectiveness Competencies

Below are the Personal Effectiveness Competencies and Key Behaviors from the first tier of the **Health: Electronic Health Records** framework. Customize your model by checking the boxes next to specific key behaviors or check the **Include All** box to incorporate all competencies and key behaviors listed.

Click on the "+" sign to view a full description of each key behavior. Click on **Edit** under a key behavior to edit the description of the behavior.

[Add Competency](#) [Add Key Behavior](#)

When you have finished selecting and/or adding competencies, click **Next**.

[Next >>](#)

Competency	Key Behaviors +	<input type="checkbox"/> Include All
Adaptability and Flexibility		
Displaying the capability to adapt to new, different, or changing requirements. New text added by John Edit		
<i>John Test Model</i>	<i>Employing unique analyses</i> +	<input checked="" type="checkbox"/>
	<i>Entertaining new ideas</i> +	<input checked="" type="checkbox"/>
	<i>Dealing with ambiguity</i> +	<input type="checkbox"/>

Sample Career Ladders/Lattices

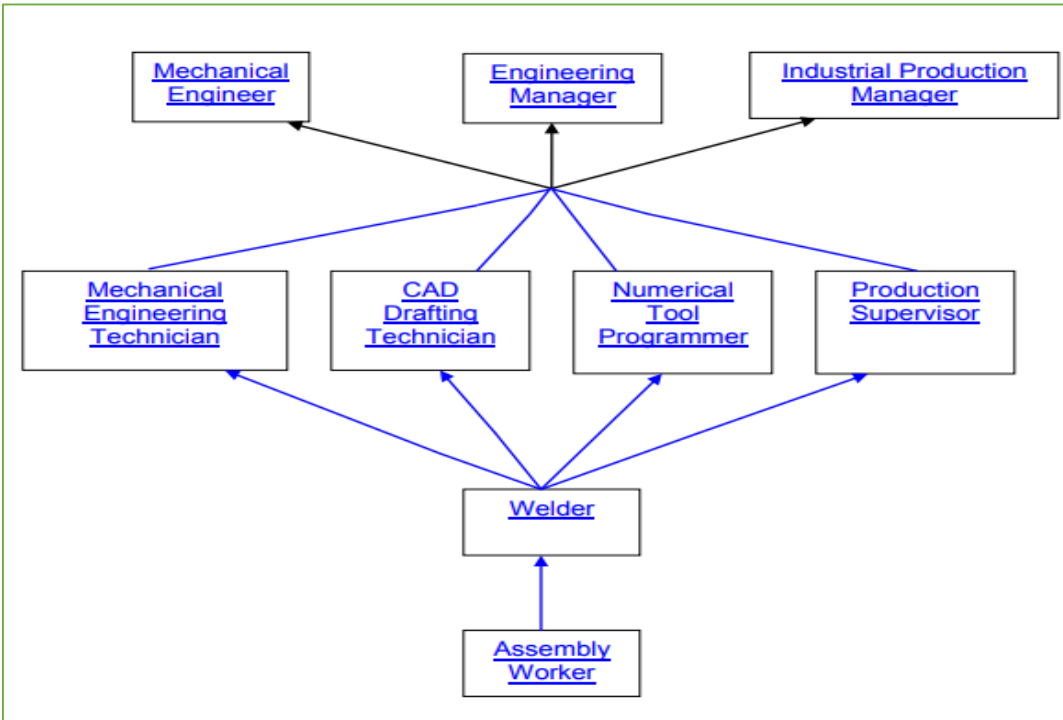
Select one of the following industries to see a sample career ladder/lattice associated with that industry. The samples show how a worker can move through a career by acquiring additional knowledge and skills through education, training, or work experience.

[Retail](#)
[Construction](#)
[Hospitality](#)

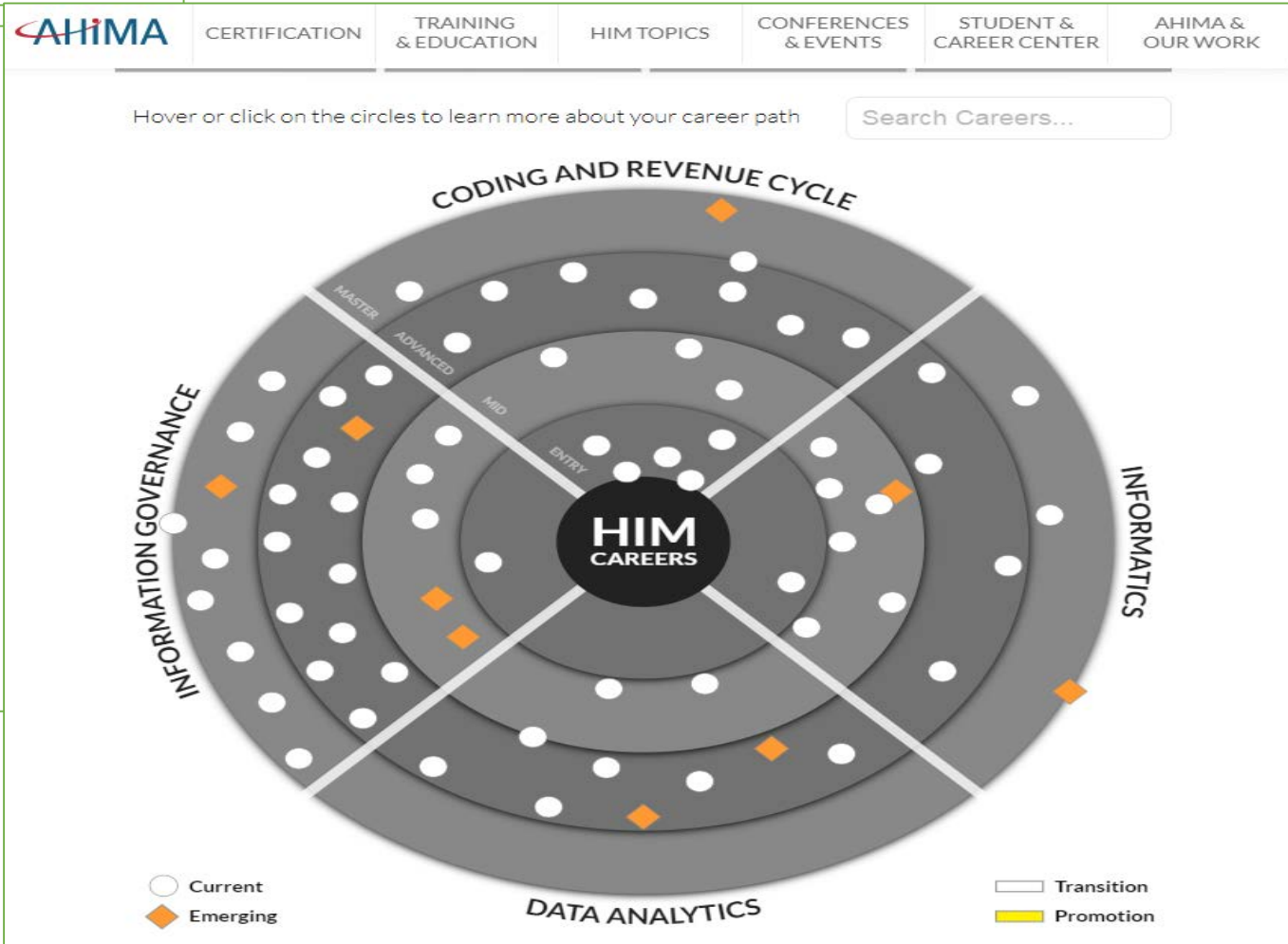
[Information Technology](#)
[Longterm Health Care](#)
[Advanced Manufacturing](#)

[Energy](#)
[Financial Services](#)

All the samples use occupations found in the Occupational Information Network ([O*NET](#)) list of occupations. O*NET is a valuable resource and contains more than 275 standardized descriptors of skills, knowledges, tasks, occupation requirements, and worker abilities, interests, and values. The ladder/lattice you develop is not restricted to the O*NET classification of occupations.



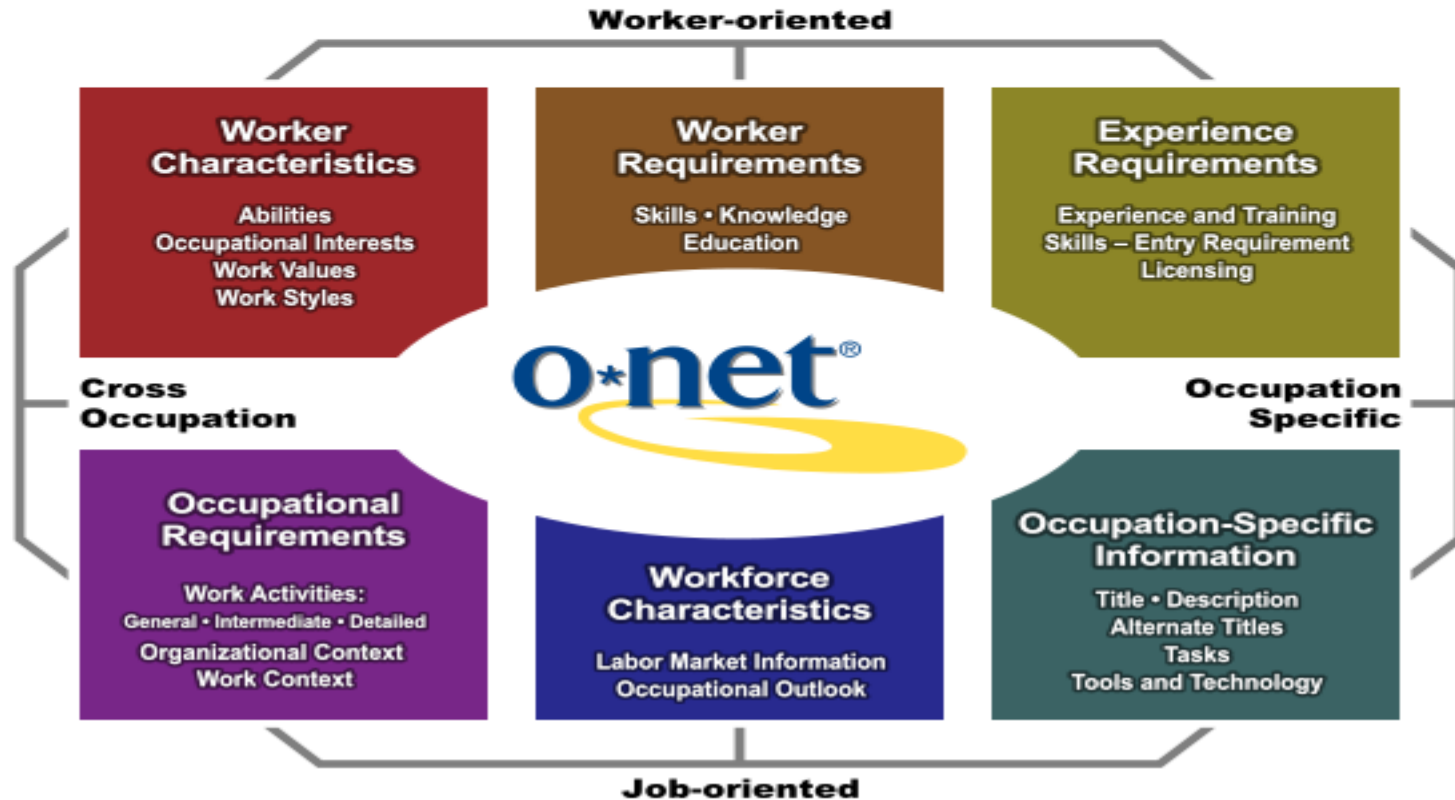
Sample career ladders/lattices





The O*NET® Content Model

The Content Model is the conceptual foundation of O*NET. The Content Model provides a framework that identifies the most important types of information about work and integrates them into a theoretically and empirically sound system.



USDOL – O*NET Content Model

- Occupational nested coding of values & labels for up to 7 content elements
- O*NET [Statements of work](#) activities are closest description available of work-based, job competencies. These incorporate KSAs.
- Where competency models in the Clearinghouse are more current & may be written as actual competency performance statements, the number of models is limited
- O*NET KSAs and work statements are normalized, more clean, and exhaustive for 1,110 SOCs in the [2010 SOC Model](#). The [2018 model](#) being implemented has 27 more.
- O*NET tied to Occupational Employment Statistics & variety of online tools, such as <https://www.careeronestop.org/> & <https://www.mynextmove.org/> w/veterans version of this at <https://www.mynextmove.org/vets/>. Also <https://www.myskillsmyfuture.org/> and <https://www.careeronestop.org/toolkit/Skills/skills-matcher.aspx>
- SOC crosswalks to data on military MOS, apprenticeships, certifications, jobs, licenses, job clubs, career videos, IPEDS providers by CIP



- 1 Tell us a job you've had.
- 2 We'll find careers with similar skills.
- 3 Pick a career and explore!

Build a bridge to your new career.

Enter your current or past job.

FIND MY CAREER MATCHES

Already know the career you want to explore? [Select a Career](#)



 Watch Help Video

 Tell Us What You Think

 New to the Workforce?
Go to **MY NEXT MOVE**



USDOL – National Occupational Frameworks

- DOL is working w/the [Urban Institute](#) on Competency-Based Occupational Frameworks for [registered apprenticeships](#) w/ job function, competencies, & performance criteria
- <https://innovativeapprenticeship.org/framework/>
- Occupational overview, work process schedule, cross-cutting (common) competencies, detailed job function analysis
- Using the framework to develop a registered apprenticeship program, w/ documentation of occupational pathways. Includes:
 - Certifications
 - Job functions
 - Stackable programs
 - Options & sub-specializations
 - Technical instruction plan
- Year one frameworks in various stages of development, including healthcare, transportation, energy, advanced manufacturing, & IT

How we're using frameworks for the portal

- Created database structure based on [CEDS](#) & informed by [Ecosystem Competency Mapping](#) and [CASE](#), cataloging w/[IMS Metadata standards](#)
- Mapping crosswalks & relationships between frameworks using locally developed open source software informed by models such as [OpenSALT](#)
- Mapping OER to frameworks used for LFCC direct assessment CBE programs, including accrediting ([CAHIIM/AHIMA](#)), disciplinary ([ACM](#)), and association/credentialing body ([IAAP](#))
- Incorporating KSAs and work statements from [O*NET](#) for 3 industries & 66 SOCs for TAACCCT & America's Promise grants
- Will catalog OER to soft/employability skills from the Competency Model Clearinghouse tier 1 - personal, [VCCS](#), [Business Roundtable](#), [NNBIA Common Employability Skills](#), & others
- Will catalog to Competency Model Clearinghouse [tier 9 - management](#)
- Waiting for [national occupation frameworks](#) from Urban Institute & thinking about how to expand mapping OER to apprenticeships

Problems in Working with Frameworks

- Sheer number of competencies & levels of aggregation/domains
- Changing standards, versioning & implementation schedules
- Educational level, sequencing for adaptive release
- Bloom's & other learning taxonomies (new/modified/custom)
- Granularity of available content & assessments, artifacts, rubrics
- Alignment w/instructional program, elective, & gen. ed. requirements, including pathways w/credit & non-credit activity
- Potential mapping to course credit equivalents (Title IV, accred)
- Other standards alignment (K-12, accrediting body)
- Proprietary nature/organizational ownership of frameworks
- Software-embedded issues (vendor, LMS, SIS)
- Utility for crosswalks (NAICS, CIP, SOC, MOS)
- Uneven quality, authenticity, performance-based, data types

Greedy for frameworks

- Looking forward to this Convening & discussion of ideas like Myk Garn's Academic Genome project & others
- Wishing we could host portal for national competency frameworks
- Want to continue dialog with DOL, leverage more out of O*NET
- Focus on employers to help bridge the skills gap
- Thinking about apprenticeship frameworks
- Exploring synergy w/potential partners to bridge the gap between employers & job seekers w/language of competencies
- Looking for shared vision, synergy, & sustainability

Knowledge to Work (K2W):

A Portal for Competencies and Individualized Learning

Lord Fairfax Community College (LFCC)

173 Skirmisher Lane

Middletown, VA 22645-1745

KnowledgeToWork.com

HigherEd.org

LFCC.edu



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