

Competency Models and Curriculum Development

U.S. DOL Competency Model Peer Learning Call #3
September 10th, 2019

PLG Overview

- [U.S DOL Competency Model Peer Learning Group Website](#)
- Focus areas identified by you!
 - Business Engagement– Call #1
 - Career Pathways – Call #2
 - Curriculum Development – Call #3 (today!)
 - Apprenticeship – Call #4 (October 2019)
- Final Webinar (Winter 2019)

Recap of PLG #2

- Heard from Bitsy Cohn of Colorado Community College System
- Showcased Career Pathways examples available in the [Customizing Competency Models Through Convening Guide](#)
- Had discussion and Q&A with Bitsy and answered questions about Career Pathways

Reflecting on PLG Call #1 and #2

- What has been most helpful about the peer learning group?
- Have you been able to use any of the resources discussed in your own efforts?
- What are you looking forward to in the series?

Today's Agenda

- Hear from Sinclair Community College about Competency-Based Curriculum Development
- Group Discussion and Q&A
- Highlight New Video Series
- Next Steps



Moderators



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Speakers



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Reference the Convening Guide

▼ PHASE 1: BUILD DATA

☰ Understand Labor Market Information

☰ Collect and Validate Labor Market Information

☰ LMI in Action: Southwest Missouri WIB

☰ **Align with State Standards**

☰ Leverage Regional Trade Associations

☰ Explore Additional LMI Resources

Example: Sinclair Community College Uses State IT Standards to Customize Competency Model

Sinclair Community College (SCC) in Dayton, Ohio, was the lead educational institution in a three state TAACCCT grant to adapt a competency-based education (CBE) approach to accelerate information technology (IT) learning across a range of occupations. Their efforts have moved beyond the grant and, to date, they've developed a total of 12 CBE programs, expanding into areas including manufacturing and criminal justice.

[Customizing Competency Models Through Convening Guide](#)

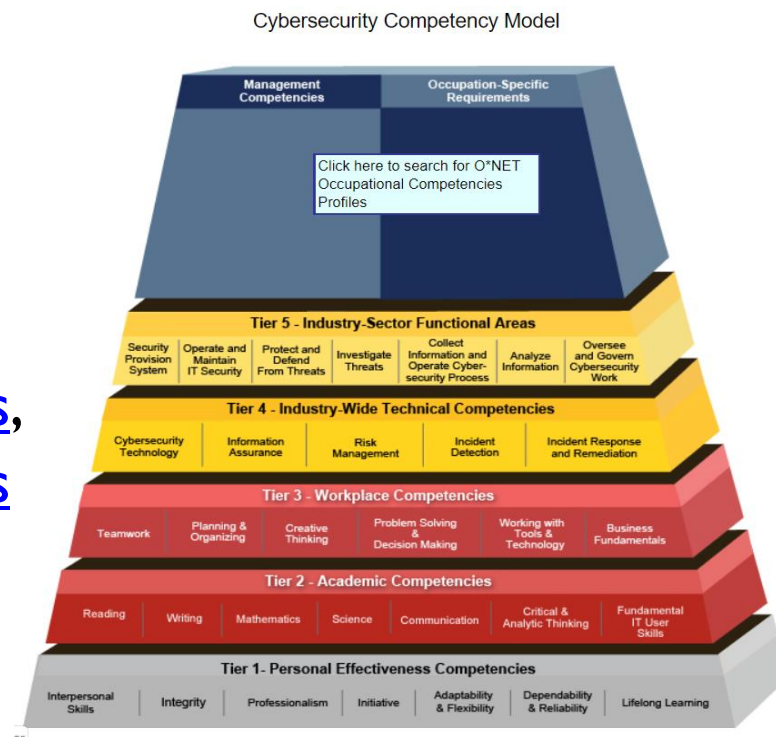
Sinclair
Community
College

Kyle Jones and Jennifer Davis

Background

The NICE Framework,

- [NIST Special Publication 800-181](#)
Work Roles (52) – The most detailed groupings of cybersecurity work comprised of specific [knowledge](#), [skills](#), and [abilities](#) required to perform [tasks](#) in a work role.



NIST/NICE

The National Initiative for Cybersecurity Education (NICE), led by the National Institute of Standards and Technology (NIST) in the U.S. Department of Commerce, is a partnership between government, academia, and the private sector that seeks to energize and promote a robust network and an ecosystem of cybersecurity education, training, and workforce development. NICE fulfills this mission by coordinating with government, academic, and industry partners to build on existing successful programs, facilitate change and innovation, and bring leadership and vision to increase the number of skilled cybersecurity professionals helping to keep our nation secure and economically competitive.

- NIST SP 800-181

Background

National Centers of Academic Excellence in Cyber Defense (CAE-CD)

The National Security Agency (NSA) and the Department of Homeland Security (DHS) jointly sponsor the National Centers of Academic Excellence in Cyber Defense (CAE-CD) program. The goal of the program is to reduce vulnerability in our national information infrastructure by promoting higher education and research in cyber defense and producing professionals with cyber defense expertise for the Nation.



CAE-CD Designations

- ◆ Four-Year Baccalaureate/Graduate Education (CAE-CDE)
- ◆ Two-Year Education (CAE-2Y)
- ◆ Research (CAE-R)

All CAE-CD Institutions are:

- ◆ Regionally accredited within the United States
- ◆ Leaders in Cyber Defense education and the development of the cybersecurity discipline
- ◆ Producers of cyber professional from mature programs
- ◆ Educating students with curriculum that meet or exceed criteria established by NSA in collaboration with academia, NICE, and the NICE Workforce Framework



Key Benefits and Outcomes

- With the CAE-CD NICE/NIST alignment the college offers different teaching modalities including more traditional and competency based to serve diverse student population
- Awarded a grant from the NSA to help build out their hands-on virtualized learning environments
- Invested in a new facility to teach Cyber Defense and make best use of grant funded equipment
- Developed in-demand curriculum influenced by employer input and industry certifications such as CompTIA, Cisco, and Microsoft
- Many graduates continue education at partner Universities or enter local cyber defense workforce

Expansion

- Developed 12 CBE programs and over 60 courses (and growing!)
- Expanded from IT to additional areas:
 - Manufacturing
 - Retail and Business Management
 - Criminal Justice
 - Unmanned Aerial Systems
 - Gen Eds (supplemental)
- Received Higher Learning Commission (HLC) approval to offer any CBE courses or programs without further application or review
- Beginning to develop cross-modality courses

Design and Delivery of CBE

Objectives/ Competencies	Vital Question: <i>What does the learner need to know or demonstrate for this course?</i>
Assessment	Built to demonstrate mastery of course competencies/objectives (e.g., pre-assessment; knowledge-checks; application; post-assessment) Note: sequenced and based on learner mastery; typically provide multiple attempts; may be proctored
Content	Based on what learners need to achieve objectives/competencies (e.g., textbook; videos; links; articles; recorded lectures or demos; etc.) Note: usage based on learner need
Activities	Watch videos; draft or outline written work; complete simulations, labs, or practice activities; explore websites, etc. Note: usage based on learner need
Interaction, Feedback and Grading	Instructors communicate with learners (e.g., email learners, post announcements, etc.), provide robust feedback, and grade in a timing manner to not impede learner progress.

Know Your Institution's Vocabulary

Vocabulary	Meaning
<i>Objective</i>	specific and measurable knowledge, skills, attributes, and habits learners are expected to achieve and demonstrate (statement)
<i>Outcome</i>	demonstration of the attainment of the expected knowledge, skills, attributes, and habits (action)
<i>Competency</i>	demonstrated mastery of a particular set of knowledge and/or skills (action)

Considering CBE @ Your Institution

- *What is your institution's vocabulary?*
- *What constitutes "Mastery?"*
- *What courses may "fit" this modality?*

Diving Deeper into CBE @ Your Institution

- *How will you manage course structure?*
- *How will you manage course assessments?*
- *Can you deploy a template or a Master Course model?*

Options for CBE Faculty Support

- CBE Faculty Community
- *Teaching CBE* training
- CBE program meetings (during and after development)
- CBE Drop-ins (for all programs)
- Institution's website or intranet
- One-on-one meetings with faculty

Questions & Answers



Video Series

6 Videos

- Overview of Video Series
- Walkthrough of CMC
- Value of Competency Models
- Alignment of Industry-Based Credentials (coming soon!)
- **Employer Engagement and Input**
- Development of Programmatic Curriculum (coming soon!)



<https://www.careeronestop.org/CompetencyModel/GetStarted/videos.aspx>

Competency Model Peer Learning Group Call #4



- October 2019
- Will focus on Using Competency Models to Develop Apprenticeships
- Be on the lookout for an email with the recap of this session and the registration link for call #4

Competency Model Peer Learning Group Series

Every other month: April – December 2019

We'll tackle hard challenges

- Convening employers to customize a competency model
- Using competency models to build career pathways
- Using competency models to help develop curriculum for education and training
- How to use competency models to initiate an apprenticeship program

We'll use real-world practitioner experts

- Community colleges
- Workforce board representatives
- Service providers

Get Started ▼

Industry Models ▼

Models in Action ▼

Tools ▼

Find Resources ▼



Get Started

Learn about competency models and the resources and tools available on the Clearinghouse...

Get Started

Industry Models

Models in Action

Tools

Latest Industry Models

1. [Engineering](#)
2. [Hospitality, Tourism, and Events](#)
3. [Enterprise Security](#)
4. [Energy: Advanced Commercial Buildings](#)
5. [Food and Beverage Service](#)

Do It Yourself

1. [Build your own Model](#)
2. [Build your own Career Ladder/Lattice](#)
3. [View Demo: Build a Model](#)
4. [View Demo: Build a Career Ladder/Lattice](#)
5. [Register Here](#)

What's New

1. [Community College Offers Competency Based Biofuels Program of Study](#)
2. [CMC Handout](#)
3. [Testimonials - Read what our users are saying](#)
4. [Industry Association Aligns Certificate Program with Retail Competencies](#)

Thank You!

To keep up with the U.S. DOL Competency Model Peer Learning Group, visit:

<https://lmi.workforcegps.org/resources/2019/05/16/14/44/U-S-DOL-Competency-Model-Peer-Learning-Group>

