2 RESOURCES & CAE2Y INSTITUTIONS

Resources

NATIONALCYBERWATCH.ORG
CYBERWATCHWEST.ORG

The Guide To KU Mapping
https://scout.wisc.edu/cyberwatch/r131

NSA https://www.iad.gov/NIETP/reports/cae_designated_institutions.cfm.

REDESIGNATED CAE2Y INSTITUTIONS:

Prince George's Community College
Whatcom Community College
Bossier Parish Community College
Community College of Baltimore County

NEWLY DESIGNATED CAE2Y INSTITUTIONS:

Coastline Community College
Eastern New Mexico University-Ruidoso

CAE2Y.NEWS

Lead Investigator :: Vera Zdravkovich // Editor :: Teri Kepner // Designer :: Dan Slater
Volume 2 // Issue 2 // CAE2Y Newsletter // **January 2015**
Center for Academic Excellence 2-Year

NSF ATE Cybersecurity Centers	CyberWatch Maryland cyberwatchcenter.org	CyberWatch West California cyberwatchwest.org	CSSIA Illinois cssia.org	CSEC :: OK cseconline.org	

Upcoming Events:

CAE/CAE2Y Webinar
May 29th, 2015
NationalCyberWatch.org

CISSE Conference
June 15-17, 2015
Las Vegas, NV
JW Marriott Las Vegas Resort and Spa

Community College Cyber Summit (3CS) Conference
June 17-19, 2015
Las Vegas, NV
Register at:
https://www.regonline.com/builder/site/Default.aspx?EventID=1651519

Important CAE/CAE2Y Dates:

- >> **January 15th //** Deadline for the CAE applications for June 2015 designation
- >> **January 15th- June 30th //** NSA CAE website will not be available for submission of applications (Institutions are encouraged to work on their applications offline during this time.)
- >> **July 1st //** The Website Opens
- >> **August 1st //** Deadline for CAE applications for the November NICE designation

CAE/CAE2Y Application Assistance

CAE/CAE2Y application assistance is available to National CyberWatch Center members. Please contact Teri Kepner, tkepner@nationalcyberwatch.org, for more information.

This newsletter is produced by the National CyberWatch Center, an ATE center supported by a National Science Foundation grant with Prince George's Community College as the lead institution.

1 KU Mapping - Foggy, Confused, Wondering, Unsure? Start Here.

Authored by Fred Klappenberger, National CyberWatch Center Consultant

Foggy about what a mapping is? Confused about the new CAE mapping requirements? Wondering how to map your institution's security courses and programs to the CAE in IA/CD? Unsure about where and how to start?

Regardless where you might be along this spectrum, CyberWatch provides help. In particular, CyberWatch distributes "A Guide for Mapping Courses to Knowledge Units (KUs)" that answers all these questions and provides a detailed, illustrated path through the mapping process.

This purpose of this article is to suggest how to use the Guide effectively. Refer to the Guide as you review the following comments. Let's go.

The Guide consists of six major sections:

1. Introduction
2. Mapping
3. **Phase 1** - Data Gathering
4. **Phase 2** - Course Data Entry
5. **Phase 3** - Formal Mapping
6. Eight Measurement Criteria

✔ 1. Introduction

The Introduction lays out the goal of the CAE IA/CD program, describes its benefits to educational institutions, and introduces Knowledge Units.

An important take-away from this section is an understanding of a Knowledge Unit: it is a logically related set of technical educational elements whose mastery implies proficiency and comprehension of a target application, skill or theory. Structurally, it's made up of a set of Topics and their related Outcomes. NSA/DHS has defined over 70 KUs. The simplest KU has a scant four Topics and a single Outcome. More complex KUs may have three or four times as many of those elements.

✔ 2. Mapping

Mapping formally marries an institution's curriculum to KUs. The result shows how course content satisfies each element of a KU. The process entails identifying specific course objectives and outcomes for each of the elements of a selected KU. Over 70 KUs have been defined as of this writing. The extent of mapping (i.e., how many KUs will be mapped) depends on the level of the institution and the curriculum it offers. Two year, four year, and graduate programs have different mapping requirements. The Guide's Mapping section explores these in detail. A summary of requirements for 2 and 4 year institutions follows:

A. 2 year institutions must map to a minimum of 11 KUs
   - All 11 KUs belong to a specified mandatory set

B. 4 year institutions must map to a minimum of 22 KUs
   - 17 KUs are mandatory (prescribed)
   - 5 additional KUs must be selected at the institution's discretion from a set of over 50.

C. Optionally, 2 and 4 year institutions may elect to identify Focus Areas (FA) they wish to have recognized. FAs consist of certain NSA/DHS specified combinations of KUs that emphasize security areas beyond the basic requirements. Those areas might include Digital Forensics, Systems Security Engineering, Secure Software Development, etc.

✔ 3. Phase 1 // Data Gathering Resources

Before embarking on the mapping journey, it pays to put together a plan of attack.

This section of the Guide offers good hints particularly for those mapping for the first time. Here suggestions are proposed about how to gather and organize the necessary references, course materials, and faculty resources to facilitate the process. Two approaches (Options) are outlined that may be used independently or in support of each other. Note that some courses may have sufficient content that they can be mapped to more than one KU. Conversely, some KUs may require two or more courses to be mapped to it.

✔ 4. Phase 2 // Course Data Entry

Once the data has been collected, they must be entered into the online NIETP database. Phase 2 addresses the process of entering an institution's course data into the database. The major work to be done at this stage involves identifying the courses and their respective major topics and objectives that will (in Phase 3) be mapped to KUs.

In the Guide, a flowchart and an equivalent step-by-step guide present an overview of the process. Deciding which one to use is a matter of personal preference as they are merely two different formats for describing the same process. The remainder of the section shows screen shots of the forms to be completed at every step involved in entering course data into the online database. Red ovals on the screen shots call attention to many of the especially pertinent buttons and data fields.

✔ 5. Phase 3 // Formal Mapping

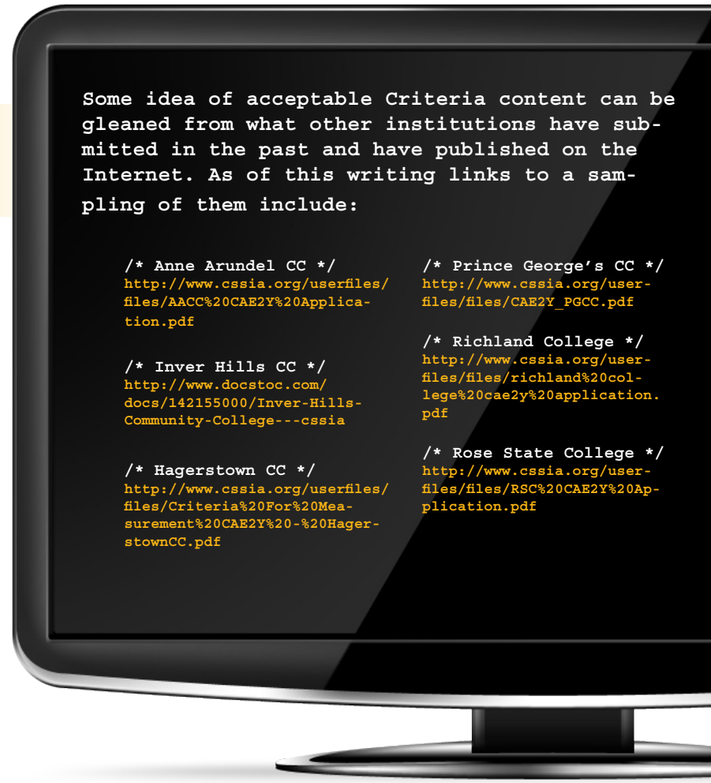
The NIETP database is preloaded with all of the KUs. So after courses have been entered into the online NIETP database (Phase 2), the process of mapping courses to relevant KUs can begin. The Guide contains an overview of the process in the forms of a flowchart and step-by-step instructions similar to those presented in Phase 2.

This section shows screen shots for each step of the mapping. In abbreviated terms, the user identifies specific KUs to be mapped, individually selects each KU Topic and Outcome and maps previously entered course elements (Phase 2) to it. This iterative process continues until all required KUs are completed.

✔ 6. Eight Measurement Criteria

Independent of and in addition to course mappings, an institution must submit evidence that it is seriously and broadly committed to and engaged in cyber security within and outside the institution. To accomplish this, eight criteria must be addressed and entered into the NIETP database. The beginning of this section in the Guide displays a flowchart that shows the process required to enter the information. There is a single, simple input format for all Criteria. Screen shots on subsequent pages show the forms and their data fields.

Criteria can be quite lengthy, however, they need not be typed into the database. Notice that the NIETP system allows an institution's criteria to be supported via http:// links and via file attachments to existing documents. Also, note that the form provides a field for additional justification.



/* This article is best concluded by repeating the final sentence of the Guide, "The best way to learn the system is to "jump in" by selecting a single course that maps to one or more KUs and follow the methods and flowcharts in the Guide." */