

ICT Educator Webinar Series

The CAE Designation: What it Really Takes and Why it's
Worth the Effort

February 28, 2020

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[00:00:00]

Welcome

SHAWN MONSEN: Good morning, everyone. Welcome to our ICT Educator Webinar Series. My name is Shawn Monsen, for those of you that don't know me. I'm the Product Development Lead and NETLAB User Group lead for the ICT sector.

Today, I'm representing Steve Wright. He normally runs these things and does a great job of doing it. Anyway, he asked me to stand in for him. Not only am I hosting for him today, but I'm also presenting today, so I have kind of a split personality.

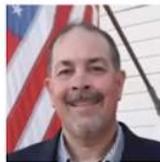
THE ICT-DM SECTOR TEAM



Stephen Wright



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Nicole Sherman

When you have time, you should go out and visit our ICT website, where we have our Regional Directors (on the previous slide) and our support team. That's me, in the middle there, and Nicole Sherman. She is heart of these series. She puts all this information together and pulls these presenters together and does an amazing job of doing that.

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Relevant, timely content for you at
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IT/CYBERSECURITY

ICT GENERAL

BUSINESS APPLICATIONS

DIGITAL MEDIA/ENTERTAINMENT

VIRTUAL LABS

We've got lots of great material out on our website, including ICT Pathways materials and prior webinars. This webinar series is intended to bring relevant information to educators and administrators to help them bring quality programs to their students. We have webinars around Cybersecurity, general ICT topics, and business topics, so there's lots of great content out there. Yeah, get out there and check the webinars.

We record all our webinars. They are chapterized and transcribed, so it makes it really convenient to be able to go out and view those webinars. You don't have to watch the whole thing in one sitting. You can find the areas that are of interest to you.

Upcoming Webinars

- **March 6:** How to Get Higher Transfer Rates in Computer Science Pathways
- **March 20:** Cloud Computing in the California Community Colleges

SHAWN MONSEN: Some of our upcoming series... On the 6th, we have a webinar on how to get higher transfer rates in computer science pathways, and then, on the 20th, Cloud Computing in the California Community Colleges. Those are the upcoming webinars.

WEBINAR PRESENTERS

The CAE Designation: What it Really Takes and Why it's Worth the Effort



SHAWN MONSEN

IT/Cybersecurity Subject Matter Specialist, ICT-DM Sector, CIS Instructor, Sierra College



NANCY JONES

Dean of Instruction, Business and Career Education
Coastline College



For today, I'm going to be talking, and Nancy is going to be talking, about CAE—Centers of Academic Excellence. Both of us belong to colleges or are associated with colleges that have their CAE designation.

Our college was just recently designated, so I'm going to talk a little bit about my experience. Basically, hey, we did it, and you can do it too. I'll talk from the approach that I wish I had known these things going into the process. I'm coming to you as a trusted advisor, saying, "Hey, you might want to do these kinds of things to make the process a little bit easier for you." Anyway, that's going to be my approach and my discussion today.

Nancy Jones—I'm sure most of you are familiar with her. She's doing amazing things down at Coastline College. She's the Dean of Instruction down there and has been leading their CAE effort for a number of years.

She's going to share, first of all, some of the changes to the application process. I don't know if you guys are familiar with this, but they are making some fairly sizeable changes to the CAE application process.

In addition to that, she's going to be speaking to this from someone that's actually been a CAE institution for a while and kind of answering the question of 'is it worth it?' She's going to be talking about results, impacts, metrics, those kinds of things.

So, we're going to go ahead and get started. We will leave time at the end for questions. Also, if you want to type your questions into the chat, we'll do our best to keep up with those, but don't hesitate to raise your hand or ask a question. Honestly, I prefer more of a discussion than a lecture, so don't hesitate to ask questions as we're going through as well.

I'm going to share my screen here and, hopefully, you can see my slides...

[00:05:09]

Agenda

- Get a Mentor
- Get Organized
- Get Help
- My Experience

SHAWN MONSEN: As I mentioned, today, I'm going to talk about the CAE (Centers of Academic Excellence) in Cyber Defense Education—that's the designation that we achieved last year. Basically, we did it, and you can do it, too. I'm going to give you some advice about how you can do that. So, on the agenda today, we're going to talk about getting a mentor, getting organized, getting the help that you need to get through the process, and then just a couple of minutes talking about my experience.



You'll notice over on the right here, these are some of our Cybersecurity students that are in our program.

[00:05:58]

Get a Mentor

- Work with www.whatcom.edu (Tosha Amos) to get into the Application Assistance Program
- Pays a \$5,000 stipend to the school representative
- Assigns a mentor to work 1-on-1 with you
- You will have regular meetings with your mentor to ensure you are on track
- Mentor will do a site visit to ensure that you have buy-in from your administration – College President

SHAWN MONSEN: The first piece of advice that I would give you is to get a mentor. The great news is that they do provide mentors to help you through the process. The first little bit of the process I was kind of on my own and felt extremely overwhelmed.

I worked with Tosha Amos over at Whatcom. They have a program where they will provide you a one-on-one mentor to work through the program, and I cannot overemphasize how important it is for you to get a mentor and work with them through this process. I literally could not have made it through the process if I didn't have my mentor.

I think Nancy was saying that many or most of the schools that didn't have mentors didn't necessarily make it through the process, and I think the success rate is over 90% for those colleges that do have a mentor. It makes all the difference.

In addition to that, they have this program called the Application Assistance Program. The first part of that is, obviously, giving you and assigning you a mentor. The other piece of that is that they will also pay you a stipend to go through the process. It's a fairly generous stipend, but as we'll talk in a little bit, it's a lot of work as well. It's nice to have a little bit of money there to help pay for the amount of time that it's going to take you to get through the process.

This mentor will work with you one-on-one. You'll have regular meetings with them. They will set up a timeline. The thing that I liked about it is it gives you someone that you have to be accountable to. You know each week or every couple weeks, you're going to be talking with your

mentor, so you have somebody to kind of keep you accountable for your progress and your milestones. If nothing else, that was really helpful for me.

In addition, they have experience going through the process, so you'll have a million questions as you're going through this process, and it's really nice to be able to send off a note to your mentor and get a quick clarification on a question that you have as you're filling out forms or going through the process.

In addition to that, one of the required aspects of the Application Assistance Program is that the mentor will need to come out and actually do a site visit at your college. The nice thing about this is that they come out as kind of an official representative of the program and really help you ensure that you have the sponsorship at your college that it's going to take for you to actually get through the process, and we'll talk a little bit about that. But yeah, they actually sit down with you and the president of your college to ensure that you've got buy-in at the highest levels of your organization. You need that to get through successfully.

[00:09:35]

Get Organized

- Literally over 100 different documents that need to be collected, organized, and submitted
 - Course outlines, syllabi, instructor resumes, curriculum paths, program descriptions, student enrollment data, student transcripts, completed student course papers, projects, test questions, articulation agreements, agreements with high schools, college security policies, etc.
- If you don't get organized, it will eat you alive.
- Can seem overwhelming – how do you eat an elephant?
 - Break it into bite-sized pieces
- Set milestones and a timeline – work with your mentor to set these.

SHAWN MONSEN: The second piece that I would talk about in terms of being successful is getting organized. There are literally hundreds of documents and pieces of information that you need to collect, organized, and submit as part of this process. Things like course outlines, syllabi, instructor resumes, curriculum paths, program descriptions, student enrollment data, student transcripts, completed student course papers, projects, test questions... Just so many different pieces of information that you have to submit to prove that your program is a quality program.

If you don't get organized, it will literally eat you alive. It's really easy to get disorganized.

The analogy—how do you eat an elephant? I know it's going to seem overwhelming, but if you can break it into bite-sized pieces... And the way that I did it is, for each criteria (I'll show you in a minute what the major criteria were), I used things like my file system and how I organized my documents to kind of keep me organized.

But absolutely set milestones and a timeline, and work with your mentor on those.

- Get started early – it will take you longer than you think
- Set aside a certain time each week to work on it
- Must submit a document for each criterion – you will end up with 40-50 individual documents
- Use the file system to help organize major criteria, then subfolders for each sub-criterion
- Use a consistent format for your submission documents

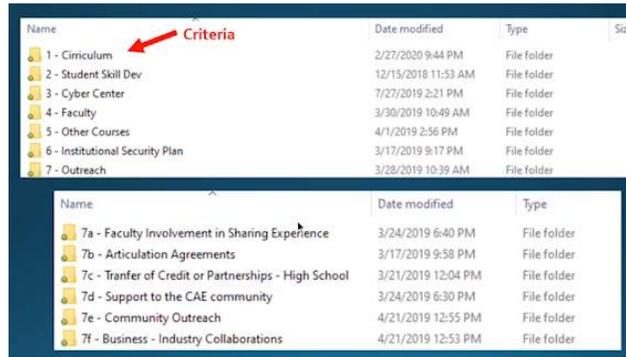
SHAWN MONSEN: Get started earlier. It's going to take you longer than you think to go through this process! One thing that I did is I set aside a time each week that I did nothing but focus on the process. Having a set time set aside really will make a difference.

As I mentioned, there are probably 40 or 50 individual documents that you have to upload to the website as part of your process, so ensuring that you have all of that organized is really helpful. I used my computer file system to help me organize the major criteria, and then I had subfolders for each sub-criterion, and I'll show you kind of what that looks like.

Finally, I came up with a consistent format for the documents that I was uploading and submitting. I'll show you an example of that as well.

[00:12:29]

File System



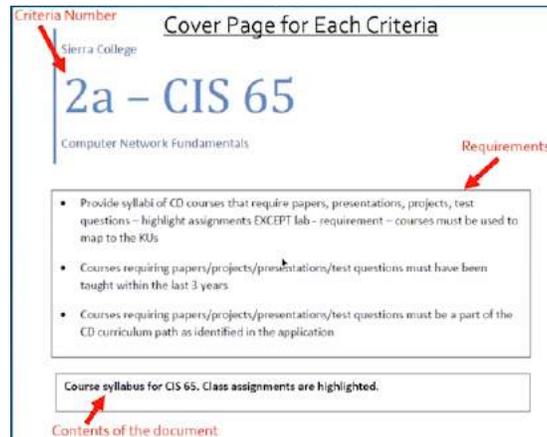
Name	Date modified	Type	Size
1 - Curriculum	2/27/2020 9:44 PM	File folder	
2 - Student Skill Dev	12/15/2018 11:53 AM	File folder	
3 - Cyber Center	7/27/2019 2:21 PM	File folder	
4 - Faculty	3/30/2019 10:49 AM	File folder	
5 - Other Courses	4/1/2019 2:56 PM	File folder	
6 - Institutional Security Plan	3/17/2019 9:17 PM	File folder	
7 - Outreach	3/28/2019 10:39 AM	File folder	

Name	Date modified	Type
7a - Faculty Involvement in Sharing Experience	3/24/2019 6:40 PM	File folder
7b - Articulation Agreements	3/17/2019 9:58 PM	File folder
7c - Transfer of Credit or Partnerships - High School	3/21/2019 12:04 PM	File folder
7d - Support to the CAE community	3/24/2019 6:30 PM	File folder
7e - Community Outreach	4/21/2019 12:55 PM	File folder
7f - Business - Industry Collaborations	4/21/2019 12:53 PM	File folder

SHAWN MONSEN: This is my file system off of my computer. As you can see, for each one of the major criteria, I have a folder with the criterion number and the description of the criterion. These used to be the seven major criteria that you had to meet, and then, under each of those, I created subfolders for the sub-criteria. You can see I pulled out #7 Outreach and showed you what my subfolder looked like. If you click on the subfolder, then I used exactly the same naming convention for all of my files, just to keep things organized. Otherwise, like I said, it's going to get overwhelming.

[00:13:19]

Cover Page for Each Criterion



SHAWN MONSEN: This is just an example of the document format that I came up with. Part of it for me was just knowing, “OK, what’s the criterion that I’m turning in? What document am I turning in? What are the requirements for that criterion?” Each one of the bullets points is for that criterion, so I listed that on the document that I turned in.

Then, to help, really you want to make it as easy as possible for the people that are reviewing your submission. You can see, down at the bottom, I just gave a short description of what was included in that document, so the reviewer would know exactly:

- What criterion is it?
- What are the requirements?
- How am I meeting that requirement? What’s contained in this document?

I would highly recommend that you use an approach like this. The easier you make it for the reviewer, I think, the better result you're going to get.

[00:14:29]

Get Help

- Start at the top – must get buy-in and support from the president of your college
 - You will need clout to get things done
- Must get support from your IT department – CIO
 - Will require that security policies are in place, dedicated cybersecurity staff
- Registrar – copies of student transcripts, program enrollment numbers
- Articulation officer – articulation agreements/dual enrollment agreements

SHAWN MONSEN: So, the next area is to get help for the love of Pete! I didn't, and I wish that I had. In addition to getting help with actually submitting the proposal itself, you are going to need help from your college and people in your college, and it starts at the top.

You're absolutely going to need to get buy-in from the president of your college because there will be situations where you need to get support from people, and you need to let them know that the president of your college has given their support for this. You may actually need to get the president of the college involved to get things done. I don't know if your colleges are like mine, but often it's hard to get a big ship moved in a certain direction, so having that clout can make all the difference.

Some of the other areas that you're going to need to get support or help in...

You're going to need to get support from your IT department. Specifically, go to the top. Talk to your CIO because part of this process requires that you have security policies in place and dedicated cybersecurity staff. They want to know that your organization is walking the walk, that they are living up to these cybersecurity principles that are part of the designation. Anyway, get support from your IT department.

You're going to need copies of student transcripts. You're going to need program enrollment numbers, so make friends with your registrar. You're going to need some help from them.

You're going to need proof that you have articulation agreements and dual enrollment agreements in place, so you'll want to talk to whomever is responsible for those in your college. At our college, it's our articulation officer. We have someone that does that.

- Web services – Cyber Center Page, events page, social media
- You'll need support from other departments
 - Cyber content in non-IT classes
- Must have assistance from the instructors that teach the classes you're using
 - Copies of syllabi, exams, labs, faculty outreach, KU mapping*

SHAWN MONSEN: Another area of help that you're going to need... Web services! One of the requirements is that you have what's called a Cyber Center Page, which is kind of the landing page that people from the outside can come to, to see your cybersecurity program. It talks about what the program is about, events, those kinds of things. So, you are going to need to work with whomever your web services person is at your college to get that in place.

Also, one of the things that you might do is use something like Facebook to actually create your events page. It should be dynamic content. Something like a social media page is probably better for that than a static webpage.

Also, you'll need to talk to the department chairs or instructors from other departments because one of the requirements is that you show you're teaching cybersecurity concepts in non-IT classes, so you need to be able to reach out to those other departments and find out what classes they're offering. At our school, a lot of it was in the nursing program and the HIPAA regulations and the data security regulations around patient data and those kinds of things. Anyway, you'll need to be able to engage with those other departments to get their content and other items that relate to teaching cyber content in non-IT classes.

Finally, and probably most importantly, you're going to need support from the instructors in your own department that are teaching the classes that you're using for your submission. You'll identify a handful of classes that meet these cybersecurity requirements, and you'll need the instructors from those classes to help you in getting the syllabi together because you'll need to

submit the syllabi. You'll need them to give you copies of redacted exams, examples of labs that the students have done, any faculty outreach that they're doing to other organizations.

So, there are a lot of components here that you're going to need help from your faculty, so make sure you engage them early on in the process. Not only that, but it would be nice, as you're filling out all the forms that you need to and creating your documents, if you had somebody to share that burden with. I wish that I had had two or three instructors or somebody there to help me through the process.

Finally, and probably most importantly, what are called knowledge unit mappings...

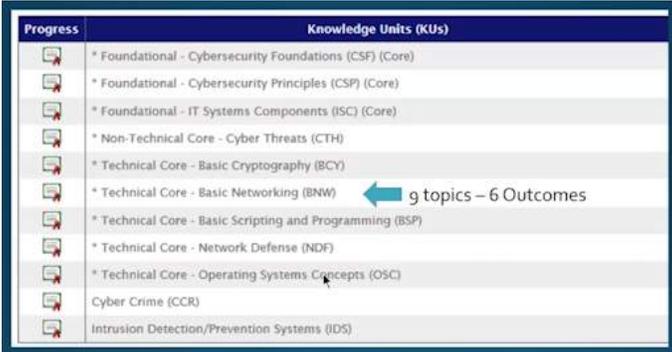
[00:19:59]

Knowledge Unit (KU) Mappings

- One of the biggest and most challenging areas
- Mapping the required Knowledge Areas to the content in the courses in your program
- Hundreds of KU mappings
- If possible, have the instructors who teach the courses do the mappings

SHAWN MONSEN: Knowledge units are really the topics areas or the cybersecurity areas that you have to show you're teaching in your program. Mapping knowledge units to your courses is one of the biggest tasks that you will do. There are literally hundreds of these Knowledge Unit Mappings.

You have to show, for this Knowledge Unit, where are you teaching this in your curriculum? That's where the other instructors come into play. If possible, have the instructors who are teaching those courses do the mapping for you.



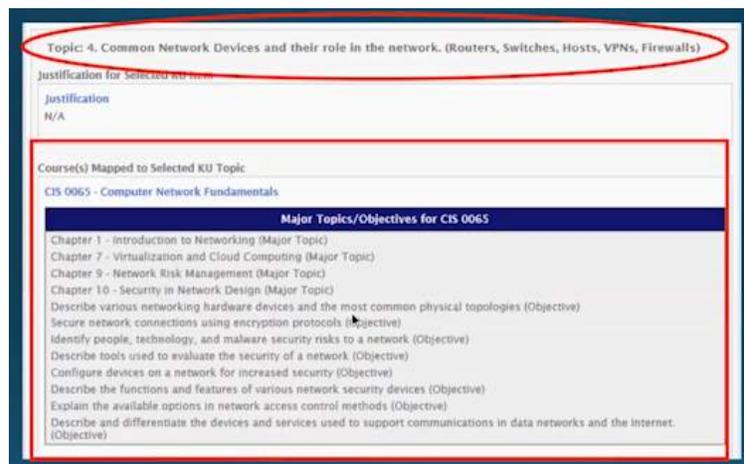
Progress	Knowledge Units (KUs)
	* Foundational - Cybersecurity Foundations (CSF) (Core)
	* Foundational - Cybersecurity Principles (CSP) (Core)
	* Foundational - IT Systems Components (ISC) (Core)
	* Non-Technical Core - Cyber Threats (CTH)
	* Technical Core - Basic Cryptography (BCY)
	* Technical Core - Basic Networking (BNW) ← 9 topics - 6 Outcomes
	* Technical Core - Basic Scripting and Programming (BSP)
	* Technical Core - Network Defense (NDF)
	* Technical Core - Operating Systems Concepts (OSC)
	Cyber Crime (CCR)
	Intrusion Detection/Prevention Systems (IDS)

Just to give you an example, these are the high-level Knowledge Units. Again, just to let you know how deep it goes, I highlighted one, Basic Networking, and there are actually nine subtopics under this Knowledge Unit that you have to address with six additional outcomes.

You can multiply that number of topics by this number of Knowledge Units, and that will give you some idea as to the complexity and the level of work that there is to map these Knowledge Units with your courses.



I drill down into one of those topics. This is actually in the Basic Networking Knowledge Unit.



This is Topic #4 out of nine, and you can see that the topic title at the top. Then, you have to go in and say what course covers this topic, and then you have to say what chapters in that course specifically cover that topic. Then you have to identify the official learning objectives from the class that then relate back to that topic.

As you can see, there's a lot of work around trying to map these Knowledge Units to your courses, so get help doing that.

[00:22:21]

My Experience

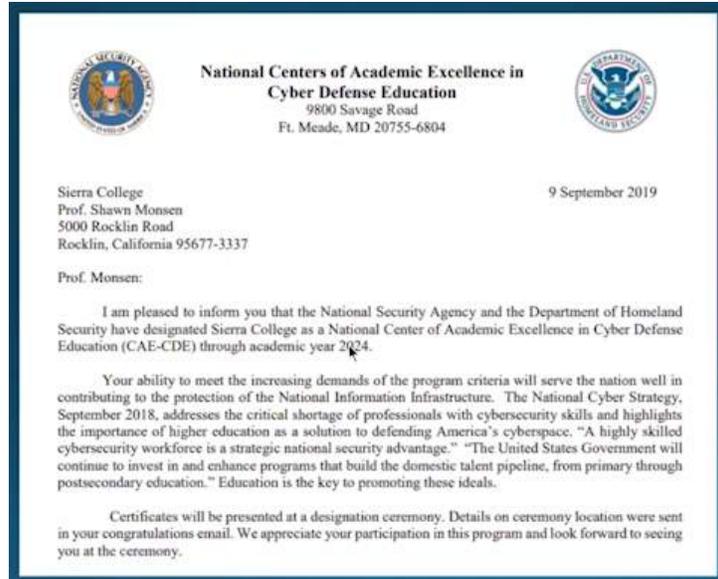
- Predecessor has an unsuccessful attempt – 2nd try
- 10-month process from start to submission
- I worked alone
- Hundreds of hours of work
- Was paid a stipend
- Mentor – Joe Murdock, Red Rocks CC

SHAWN MONSEN: Finally, we had made an attempt to get our CAE designation. Before, it was an unsuccessful attempt, which kind of made me feel even more pressure to try to get it done this time. It was basically a 10-month process from the time I signed up to the time that we received our confirmation of our award. It can be a long, drawn-out process.

I worked alone in terms of putting all the pieces together. Obviously, I worked with other departments and those other folks, but I was the only person putting this proposal together. Don't do that. Learn from my mistakes.

Literally hundreds of hours of work that you'll need to put in on these, so just be prepared. I wasn't really prepared for how much work it was going to be. I did get paid a stipend, and that does help, but if you look at the stipend versus the number of hours... Don't do it for the money, is what I'm trying to say. The designation in and of itself is reward enough.

My mentor was Joe Murdock from Red Rocks Community College in Colorado. Again, I can't say enough or thank him enough for the help that he gave me to go through that process.



And yes, you too can get one of these letters from the CAE saying that you, in fact, have been designated as a National Center of Academic Excellence in Cyber Defense Education. You too can get there.

Any of you that are thinking about going through the process, don't hesitate to reach out to me. If you have questions or need help or whatever, feel free to reach out to me. I'm happy to answer any questions that you have. Why don't we go ahead and open it up now? I'm going to stop sharing my screen.

Were there any questions? All right, Nancy, do you want to get started?

[00:25:16]

CAE Application Process – New Process

NANCY JONES: Sure. Can everybody see my screen, where we are? Yes/no?

SHAWN MONSEN: Yep, we can see.

NANCY JONES: So, I'm going to be talking a little bit about the process because, since even though Shawn is a new designee, they've gone through, and we're in the process of redoing some of it. So, I wanted to kind of bring a little attention to that.

But then I also want to talk about the benefits. There are now seven community colleges in California that have the CAE designation—yay! Feel free to chime into some of the benefits you guys have also received from this, too. Anyway, that's what I'm going to be talking about.

[00:26:06]

Types of Designation

- CAE CD Associate
- CAE CD Bachelors, Masters, Doctorial
- CAE R (Research)

NANCY JONES: We used to be called CAE2Y, and now we're being called CAE CD (for Cyber Defense) Associate, and then the four-year institutions are going to be CAE CD Bachelors, CAE CD Masters, or their Doctorial. The four-year institutions also have the optional research designation, which is a totally different designation. Again, it's more for the research areas.

But they keep changing how they talk to us. Up through, I think it was, 2010, they didn't even have any community colleges that had this designation, so they've been kind of playing with that as they're going through there. So, now we're called 'Associate.' Just keep that in mind.

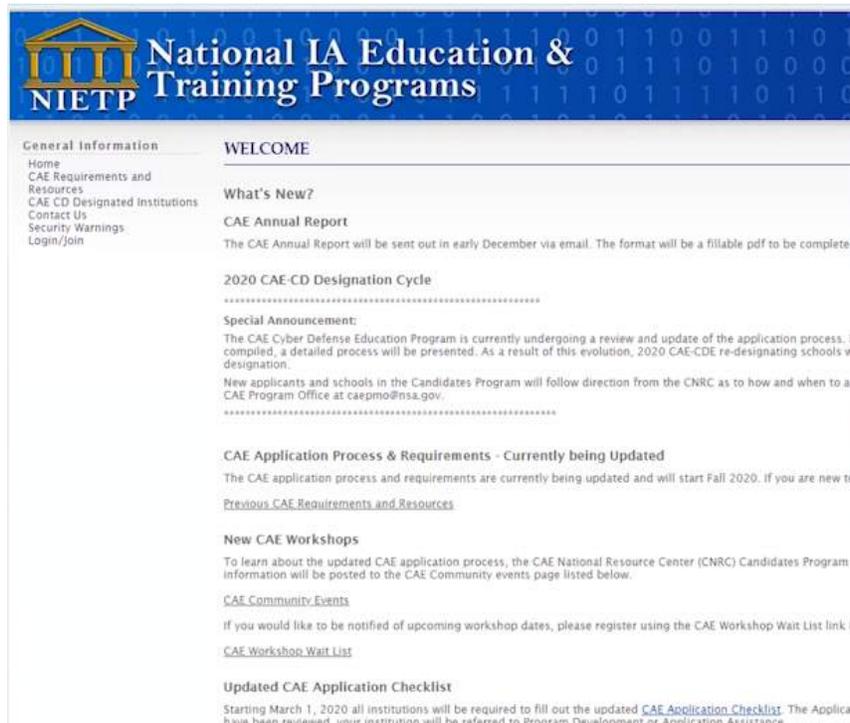
[00:27:00]

NIETP Program Website

- NIETP (National IA Education & Training Programs)
 - <http://www.iad.gov/NIETP/index.cfm>

NANCY JONES: Most of you guys are aware that this is from NSA and Homeland Security. This is the website. It's under the directorate for the National IA (Information Assurance) Education and Training Program. That's why it's NIETP, which is... After a while, you'll get that on your tongue so it's not a problem, but that's the website, and I wanted you to have that.

And this is what it looks like...



As you are going there, everybody's systems are going to be trying to block this and say, "It's not protected. We don't actually go there. The certificates aren't up to date." And all that kind of

stuff. They know that. It's a government institution, even though it's cybersecurity. I just think that it's so funny!

Anyway, just keep going through and accepting it, and it will take you to their homepage. This is the homepage you really need to become familiar with because this is where you're going to be getting all the information.

Up in the upper left-hand corner is the homepage, where we are, but it also has the CAE requirements and resources, which are really helpful, and I'll take you there in a second. It has a listing of all the CAE-designated institutions. There are now 311 institutions. There were 175 when we first received ours six years ago, so it's been growing fast. You can actually see by state these designated institutions, and then they have contact information and stuff but also login.

So, right now, we're logging in through here to put in applications, although the application website is down right now. But this is where you would go at this point. They are going to be moving that to the CAE community website as they go through this process.

What they have been doing, because there are so many people that are applying and who are trying to get information on the CAE information, the federal government, when they need to make changes to processes or to servers, you would think that they would have it be instantaneous. We think we're the only ones that have to wait around for purchase orders and submit approval and all that kind of stuff. It's been taking them years to try to get this application tool updated and corrected and make it more user friendly. Shawn can verify that it's really a rudimentary application format right now, but it's going to be nice and more user friendly as we go forward. And hopefully, it will save us a lot more time, but it's just been a long process because the government really is the Titanic, and it's very slow to make any changes.

But right now, this is where you would go. I do want to point out, once you get the designation, just like with your regular accreditation that you have for your college, you have annual reports that you have to do. Usually, they're not too difficult to do, but you do need to work with your institutional researcher to pull that data up. So, the year following your designation, you have to do that.

It also talks about the designation cycle. This is where they're making that announcement that, because the application tool is being redone, they're not opening it up. I heard they're going to try to do fall, but I'm not sure if they're actually going to make that or not. But all the institutions that were redesignated in 2020 are able to have an additional year to redesignate. This is a big deal that they're totally reworking this entire website. They've been talking about it for years, but now it's in process. So, the application process is not open to anyone.

The redesignation process is not open to anyone either, but you can still get the information about the KU (Knowledge Units) that Shawn was talking about and the criteria that you have to gather information. You don't have to stop doing everything at this point. You can still go through and start gathering all sorts of documents that are located on this website. That's why I brought it to your attention.

There are also these new CAE workshops that they have. A lot of times, they have it at Coastline.... They had one in December, I think it was. November, I guess it was... So, we usually have a couple a year, and that's not put on by Coastline. Coastline just hosts it because they're pretty easy to get.

But it's where Whatcom comes in and sends different mentors or different people from other institutions to come in and present on the application itself so that you are more comfortable with that. I don't know, Shawn, if you had gone to one of those or not.

SHAWN MONSEN: No, I didn't.

NANCY JONES: OK, that would have been really helpful. They didn't have them when I did it. I did our first application. Because my vice president actually wants me to do my dean job instead of just pretending that I'm full-time cybersecurity, I handed it off to [Toby 00:33:00]. She did it the last time and did a phenomenal job.

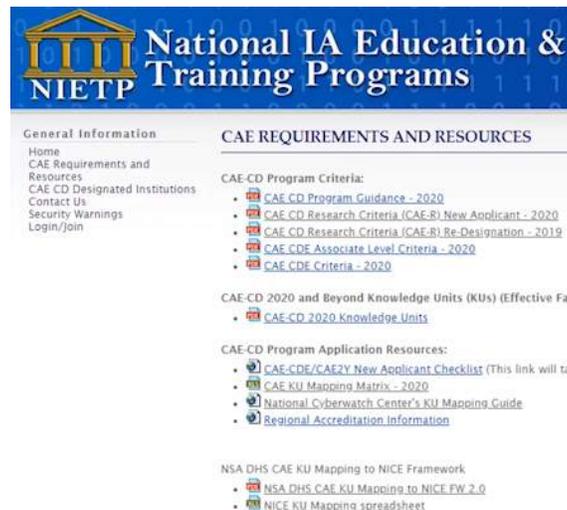
Anyway, she went to several of these workshops, and she now still is asked to attend those to try to do exactly what Shawn was doing, so his input is valuable—extremely valuable—for you. Those are some opportunities to get some insight on how this all works.

I also wanted to mention that there is the CAE Community Events. That is a website that is for the CAE institutions. The forward-facing website has information for anybody interested in cybersecurity that wants to be a CAE institution. They do grant you access to the inside information, so you could do that.

Then, down here at the bottom, do you see where it says 'Updated CAE Application Checklist?' If you go there, it takes you to the CAE Community website, and it says you can't go any farther from here because the application checklist is being redone as well. So, don't get your hopes up when it redirects you somewhere because it actually does allow you to be able to pull that up.

[00:34:16]

CAE Requirements



The screenshot shows the website for the National IA Education & Training Programs (NIETP). The header features the NIETP logo and the text "National IA Education & Training Programs". Below the header, there is a navigation menu on the left with links for "Home", "CAE Requirements and Resources", "CAE CD Designated Institutions", "Contact Us", "Security Warnings", and "Login/Join". The main content area is titled "CAE REQUIREMENTS AND RESOURCES" and contains several sections of links:

- CAE-CD Program Criteria:**
 - CAE CD Program Guidance - 2020
 - CAE CD Research Criteria (CAE-R) New Applicant - 2020
 - CAE CD Research Criteria (CAE-R) Re-Designation - 2019
 - CAE CDE Associate Level Criteria - 2020
 - CAE CDE Criteria - 2020
- CAE-CD 2020 and Beyond Knowledge Units (KUs) (Effective Fall)**
 - CAE-CD 2020 Knowledge Units
- CAE-CD Program Application Resources:**
 - CAE-CDE/CAEZY New Applicant Checklist (This link will tak
 - CAE KU Mapping Matrix - 2020
 - National Cyberwatch Center's KU Mapping Guide
 - Regional Accreditation Information
- NSA DHS CAE KU Mapping to NICE Framework**
 - NSA DHS CAE KU Mapping to NICE FW 2.0
 - NICE KU Mapping spreadsheet

NANCY JONES: Once you go to the CAE Requirements page, this is where you get all the documents that are really helpful, and this is where you can get started into the checklist and where other things are submitted.

This is really critical—I'm always directing people to this.

You have the Program Guidance as the first document, and it actually talks you through the different steps and what's going on. It kind of gives you an idea of the entire process, but it's not specific because it's being changed.

Then, they have New Applicants for CAE R. They have the Associate level and so on. So, they have all the documents here that would be very helpful for you to go in and start the process of gathering the information.

Now, the things that Shawn has done and the things that we've done in preparation for the designation, they're still there, the majority of the items. They're just tweaking some of them, so you're not going to waste time becoming familiar with what the criteria and Knowledge Units are, or even organizing things.

Shawn, your office must be the most organized thing in the entire world. I've never seen anything so organized as your setup, but I can see where it would save so much time. So, if you're considering this, get with Shawn, so he can help you set up some organization to be able to gather that because it will drive you nuts, the 40 or 50 documents—that's on the low side, I think. There are a lot of things to gather, a lot of things to keep track of, and being organized is crucial.

But here's where you need to go all the time!

[00:36:10]

Begin with the Checklist

- Not available at this time
- <https://www.caecommunity.org/content/cae-program-applicant-checklist>
- Determination for Readiness to Apply or Program Development
 - CAE-C Community National Center (CNC) (formerly CNRC)
 - CAE HUB (formerly CRRC)

NANCY JONES: I mentioned that the checklist isn't up right now, but that's the place to start. They'll have that up soon. The reason you want to start there is that, once it is available, you go through, and they ask you where you are in your program development and how long it's been there and those kinds of things.

One of the metrics is that you have to have three years of graduation or certificate earning data. That is one of the stumbling points that a lot of people have. It also asks you for information, like, do you offer classes that cover this? Or do you have outreach? Another stumbling block that a lot of people have are the competitions. If you're not in the competition arena, you need to get that done.

What's nice about this checklist is it goes through, and even if you have 'no' on every item that's on the checklist, don't be discouraged. When you submit that checklist, it's goes up to Whatcom Community College, and it's Whatcom.edu. They were going through a process of applying for new centers... Coastline is a CAE Regional Resource Center for the southwestern states, but they're having to apply again. There will be a shuffling. The regions are changing, and the CAE leadership is changing, but I think Whatcom is going to still keep their mentoring and their special resource center area.

So, we send it in to the email address that's on the checklist. From there, they have people that look at your answers. They send it to Whatcom to look at your answers, and they decide

whether you're within one year of completion of having a successful application or if you need to have some more program development.

If you're within one year, that's when you are assigned if you want to have a mentor, like Shawn had, and you're assigned that from Whatcom. Then, if you need more help on development on some areas, then you're given to the CRRC (what's now going to be called the CAE HUB). While they don't do monthly meetings or those kinds of things, they look at your application to kind of give you some ideas of what you need, and then you can questions, and they're there to stand next to you and help you, but they're not there to do your application for you. Just like when Shawn had his mentor, his mentor didn't go through and do his application. Shawn had to do all that hard work and stuff.

SHAWN MONSEN: Unfortunately.

NANCY JONES: Yeah! You're a better man for it, right?

SHAWN MONSEN: Oh, yeah. Yes.

NANCY JONES: Anyway, just be aware there is a change there, but do the checklist first because it also opens up plenty of opportunities for conferences and different activities that, when you're first starting out, you might not have the funding to do that. They make funding available for not only those that are within the year, like Shawn was, or those that are in program developments that are sent out to the CRRC.

[00:40:01]

Submission Process

- Application Website
 - Letter of Support
 - Program Criteria
 - CAE KU Mappings
- Program Evaluation
 - 12-16 Weeks
 - Panel of NSA and Peer Reviewers
- Request for Clarification

NANCY JONES: The submission process... I should mention the application website—that letter of support is critical, and Shawn just really went over that wonderfully. But then realize there are two sets of documents that you're collecting.

One is program criteria, and that's really more of activities... That's for your information about your articulation agreements with the CSUs and the high schools, and the pathways and those kinds of things, the types of faculty members you have, what their resumes are, what professional development and support you have and stuff like that.

And then you have the KU Mappings, and I think the KU Mappings, for me, were the most difficult, and they're so much more extensive. We used to not have to give student work as an example to meet those criteria, but there's a lot to those. So, don't get the two confused. Just because you do program criteria and think you're halfway through, you're not. You're only a quarter of the way through. The KU Mappings are the most difficult part, but they just need to make sure that you have a quality program—and you all do! Anyway, this is something you have to do.

Once you submit your application, it's about 12 to 16 weeks. It used to be one person at NSA that would go through and spend hours going through your application. For example, our last

redesignation in January 2019, when they did that, we had to give them a link to our Canvas shelf. We clocked it at 125 hours that they had been in our Canvas shelf, looking at our courses. They're not just giving it a casual look. They're really digging down.

Now they're going to be having NSA representatives but then also a panel of peers who are CAE representatives from colleges that have CAE designation, and they're going to come out to your site, you have to go and meet them and defend your application. But by then, you will know the ins and outs of everything about your program, so that won't be a problem.

They also have requests that they will send out from time to time. Shawn, I don't if you were able to not get one of those. We didn't get it this last time, but the first time, they had asked some minimal questions, and then you had to respond. But now they're really sticking with it. You have one week to respond. If you don't respond with the information that is satisfactory that removes their question, then you've just been declined your application. So, be aware that they may come back and ask a few questions. It's good because they're looking at your application, but make sure you respond very quickly.

SHAWN MONSEN: Yeah, I would second that, Nancy. We actually went through several rounds of clarification questions. Yeah, you need to make sure that you're timely in your response to their questions and that you do a good job of actually answering the question. They're trying to get to the bottom of what's going on, so you need to be timely in your response.

NANCY JONES: Yeah, exactly, exactly, because they're putting in about 20 to 30 hours a person on this for each application, and you can see they probably... I think they're getting around 60 or 70 applications a year or every cycle—there are two cycles that you can apply to. Anyway, they don't have the time to keep going back and asking for things, so just respond to them when you can.

[00:42:33]

CAE: Is it Worth the Work?

NANCY JONES: Now, is it really worth it? Shawn, do you think it's worth it, all your hard work?

SHAWN MONSEN: Yeah, absolutely, absolutely.

NANCY JONES: OK, well, good. I think every institution feels that way.

Program Improvement

- Know what feds, industry, employers need and want
 - NICE Framework
 - CAE KUs
- CAE Community
 - Evaluation Tools
 - Research
 - Professional Development
 - CAE Community

NANCY JONES: I put on here 'Program Improvement,' and this is why...

We all think our programs are the best thing out there, so I was really proud of our program, and it wasn't until I started going through and looking at the criteria and everything that they were asking for in the Knowledge Units that I was like, "Whoa, I need to kind of step this up a little bit."

I squeaked by the first time with some of the areas, but by the time we came to the redesignation process... It's kind of like accreditation—if you have a finding for your accreditation, you know how your college starts immediately for the next round to try to get that fixed? We were really weak on our competitions because it was when CyberPatriot was starting to take off, and there were just a couple other competitions that were out there, but there weren't many.

I worked with Dan Manson from Cal Poly Pomona, and he helped us kind of get our competitions going, but for my documentation, I sent in the purchase orders of the equipment that we were buying to support the program and put in the plan and who I had talked to and those kinds of things. So, they took it, but now they're a lot more... The competitions are a lot stronger all over, so if you need help with that, feel free to ask any of us, and we can help you get that, but you have to have the documentation.

So, I thought I had a great program, but it wasn't until it came to my mind, going through the things, like, "Oh, I need to strengthen this or that..." Our program is so much stronger now than it was when we first applied because we didn't know what the mark was that we were supposed to be towing because it was such a new area.

You do have access to the CAE Community in itself. When we talk about the Community, it's not just the Community website. It's Shawn and Toby and myself and all the other institutions who have gone through that. It's nice to be able to have them to bounce ideas off of, or if you're trying to start a new focus area for your programs, it's nice to be able to have someone who has been there and has a program that has the CAE designation who knows what the quality and the rigor needs to be for your program. It's nice to have that.

Shawn, did you want to add something?

SHAWN MONSEN: No.

NANCY JONES: OK. Also, as the CAE Community, we have some workers that are out looking at different evaluation tools because they want to be able to have metrics to be able to show legislators. As part of that, they need to have some way of judging the quality and the skillsets that our students have.

We're working on... I know that the work I'm on has about 40 people on it. It's a great way to get some evaluation tools that you could actually take back and use on your institution as you're trying to get a group price so that we don't have to buy them as individual colleges. There are

some really great tools out there that are looking at different cyber ranges and other types of things like that to give us access to, if they have metrics on keeping track.

We also have access to a lot of research. I know that I was on a research project with [inaudible] University, and we were looking at what the restrictions for trying to hire new faculty in cybersecurity. I don't know if you've had any luck going out... We always go out and have at least two failed searches every time, but we have one open now, if anybody is interested! Just finding qualified faculty members in our area... That was really exciting to get involved with that research grant.

There's also professional development that is being offered through your CAE HUB or your CRRRC. There have been a couple years where we helped foster the WASTC, where we sponsored that. There are webinars that are being done currently by Dakota State. They have a strong online program that they've delivered education through. So, you have access to free training along those lines.

And then, again, the CAE Community website gives you access to different types of things that are interesting to all of us.

[00:49:44]

Students Are the Winners

- Job Fairs
- Scholarship for Service
- GenCyber Camps
- NSF
- Webinars
- Access to opportunities not afforded non-CAE institutions

NANCY JONES: Some of the things that make this a winning situation for the students... They have job fairs that are set up by NSA and Homeland Security and other government organizations that are only open to students of CAE institutions.

They have Scholarship for Service opportunities... They've just added in the last couple years the two-year as well as a four-year where it pays for students' tuition and housing and everything, and then they have internships at government or NSA sites. The idea is that, once you finish your four-year degree, then you spend two years... It's like Peace Corps or something, where you have to work for a couple years afterwards to pay for it.

You have GenCyber Camps. There's a special grouping. Anybody can apply for GenCyber, but if you're a CAE institution, you get an extra few points for that. We found that, because of our designation, with our NSF grant, because we're a CAE institution, it shows people we're credible and we know what we're doing for the students.

And there are weekly webinars to help us maintain our knowledge of what's currently going on in the institution, and all of these things are just for the CAE institutions, not for the general public. So, yes, it's very much something that's really great.

One last thing, and then I'll finish because I didn't mean to talk so long...

[00:51:06]

Yes, it is Worth the Pain!

- Recognition
 - National, State, Local, College
- Grants
 - National, State, Regional
- Collaboration
- Part of a Small Community (311)

NANCY JONES: Grants... We have been able to receive quite a few grants, and it's because of the CAE designation. We have a cybersecurity apprenticeship grant that was \$1 million from the State of California, but I think the reason we got it was because of our CAE designation and some help from Steve Lithicum, if he's out there.

Also, we've gotten state, regional, and national grants because of our CAE designation, so it opens up a lot of funding opportunities to be able to... Your administrators like having grants, if you don't know that, but it also gives you a lot of fun opportunities to get involved.

Then the collaboration portion is just being able to talk with people who know what you're doing and what's going on with you—it's really exciting.

Anyway, that's what I wanted to share. I'm sorry I took so long. I just love this topic! Shawn, you want to take it back?

SHAWN MONSEN: Yeah, yeah. Awesome. Thank you so much for sharing that information, Nancy. It's really appreciated, and I know it was helpful to a lot of people.

Additional Resources

- View past webinars or sign up for upcoming at www.ictdmsector.org/educator-webinars
- Work with www.whatcom.edu (Tosha Amos) to get into the Application Assistance Program
- NIETP (National IA Education & Training Programs): <http://www.iad.gov/NIETP/index.cfm>
- Get the CAE Program Applicant Checklist here:
<https://www.caecommunity.org/content/cae-program-applicant-checklist>