

CIS Advisory Committee Meeting Minutes – 10/13/2022

Networking Cyber Security KSA Follow-up

PROGRAM COMMITTEE NAME:		Computer Information Systems Business Leadership Council			
CHAIRPERSON:	Karen Boatman				
MEETING DATE:	10/13/2022	MEETING TIME:	1:00 pm	MEETING PLACE:	Byrd Business Building, Room 103
RECORDER:	Kathy Davenport			PREVIOUS MEETING:	05/12/2022
COMMITTEE MEMBERS					
	NAME	TITLE	EMPLOYER INFO	PHONE	EMAIL
X	Rich Gagnon	Chief Information Officer	City of Amarillo	806-471-1516	Rich.Gagnon@amarillo.gov
	Michael Keogh	Technology Officer	Region 16	806-290-2061	michael.keough@esc16.net
X	Trevor Wagner	Instructor	AmTech	806-881-9733	trevor.wagner@amaisd.org
X	Jeff Stoughton	Instructor	AmTech		jeff.stoughton@amaisd.org
	Kyla Collier	Nanotechnology	Kamino	806-553-0303	kyla@kaminotech.com
	Star Raburn	Owner/Software Company	Skylabs Technology	480-343-5451	star@skylabstechnology.io
	Rashid Patel		Kamino		
X	Chris Michaels		Pantex		
X	Tiffany Lefleur		Pantex		
X	Charlotte Lewis		Pantex		
EX-OFFICIO MEMBERS					
X	Edie Carter	BSET Chair Person	Amarillo College	806-345-5671	r0114502@actx.edu
X	Kevin Cheek	Coordinator Employee Relations	Amarillo College		kdcheek@actx.edu
X	Adrine Harrell-Carter	Director of Perkins Basic Grant	Amarillo College	806-371-5166	ajharrellcarter@actx.edu
X	Barbara Wahi	Director of Work Based Learning	Amarillo College	806-371-5974	
X	Hope Cotner	President	Center for Occupational Research and Development		hcotner@cord.org
X	Karen Boatman	CIS Program Coordinator	Amarillo College	806-371-5930	keboatman@actx.edu
X	Chris George	CIS Instructor/Esports Coordinator	Amarillo College	806-371-5374	c0245396@actx.edu
X	Lynne Kenney	CIS Instructor	Amarillo College	806-371-5275	l0504159@actx.edu
X	Delane McUne	CIS Instructor	Amarillo College	806-371-5220	s0059629@actx.edu
X	Joseph Melius	CIS Instructor	Amarillo College	806-371-5213	jamelius@actx.edu
X	Kathy Davenport	Administrative Assistant	Amarillo College	806-371-5269	kathy.davenport@actx.edu
AGENDA ITEM		ACTION / DISCUSSION/ INFORMATION			
Old Business:		N/A			

CIS Advisory Committee Meeting Minutes – 10/13/2022

Continuing Business:	NA	
New Business:	<p><i>Earn and Learn</i></p> <ul style="list-style-type: none"> ● AC Earn and Learn Program ● CIS Specifics for Earn and Learn ● Discussions and Commitments <p><i>Discussion of KSA Cross Referencing to Curriculum</i></p>	
Curriculum Decisions:	NA	
Other:	NA	
KEY DISCUSSION POINTS	DISCUSSION	
Continuing Business		
New Business:	<p>The meeting was called to order at 1:05PM. There were new attendees to the meeting, so everybody gave a brief introduction with their name and where they worked as the meeting got started.</p> <p>Karen Boatman turned the meeting over to Barbara Wahi to talk about the Earn and Learn program. Barbara stated that one aspect of the BLC is that using their input, we are able to design the curriculum in order to provide the type of employees that businesses are looking for. Barbara stated that we are looking to align our program with local business needs. Barbara stated that what we are trying to do is get the students the work based learning that will help them further prepare for the workplace once they graduate. She stated that we want to make sure that business leaders like them have a say in our curriculum to make sure that we are teaching our students the information they need know. She stated that we are working to build a Business Leadership Partnership, so this won't be a one-time meeting, but will be a continued partnership. She stated that we are also looking to help the students build career relationships. Barbara went on to explain that Earn and Learn is going to help the students with hands-on learning, but also help them to earn college credit, as well as pay in the form of a stipend that the companies will pay the students for the internships. She stated that the CIS program is working to embed the internship into the curriculum so that the students will be able to earn that college credit while working during the internship. Barbara stated that the internships will last either 8 or 16</p>	

CIS Advisory Committee Meeting Minutes – 10/13/2022

weeks, depending on the curriculum, and anywhere from 6 to 10 hours per week. She stated that we are hopeful that some of the internships may continue after the class is over and continue to work full time for the company. She stated that we will still encourage the students to continue their education and not give up on that because they are now working, but the faculty can work with the students and companies to see if a longer arrangement is appropriate. Barbara stated that we are working on setting up an internship class at the college that will allow the students to gain the experience while still on campus. The students will either work for a company or work on a project assigned by the company and that will be their hands-on learning for the class. She stated there will be a part of the curriculum in the first term of the program that will teach the students soft skills, as well, that will help prepare them for the workplace. She opened the floor for discussion at that time and asked if there were any questions. Rich Gagnon stated that there are a lot opportunities for students to work with many of the surrounding areas around Amarillo. Trever Wagnor stated that they are already doing a lot of this at AmTech with their students. He stated that some of them are even taking an etiquette class to improve their soft skills. Trever stated that a really hard part for them is that their students are high schoolers, so most are under the age of 18, so getting them into areas of cyber security is really hard, so this type of program at the college level will be really cool. Rich stated that he is wondering if there could be an opportunity with the City of Amarillo. He stated that the city just recently finished a project that is going to bring fiber optics to a whole underserved area in town, and there will be a lot of educating the public on what they are doing. He stated that there is going to a larger project that will be reaching out to other areas around Amarillo, and there could be a great opportunity there for the students to help with that project in other areas. Delane McUne stated that we can work with something like that, and Rich stated that they would talk more about that later.

Barbara stated that the college has multiple opportunities for the students in addition to the internships. There are cooperatives which allow the students to earn college credit while working, and there are projects which the students will be able to work on while still on campus.

Delane asked XXXXX if there was an opportunity to work out an internship at Pantex. XXXX stated that they do have an internship program. She stated that it runs through the summer from 8-10 weeks, depending on the year. She stated that if there were things set up at AC correctly, it could be a possibility. Barbara asked Karen if a summer curriculum could be done to accommodate that. Karen stated that as long as it was set up properly, she didn't see a reason why it couldn't work that way.

There was discussion about how getting the students started early will give them an advantage in that they will be able to learn sooner if the course they thought they wanted to take is not what they thought it was. It was stated that they will be able to see a broader scope of what the job will really entail, and that will help them decide if they really want to go that route, or if a different area of the CIS program would be more suited to them.

Barbara stated that Kevin Cheek and Delane McUne, and maybe some of the others, would stay in touch with the members of the BLC regarding this opportunity. She stated that we still have to take this to the curriculum committee for the Earn and Learn portions, and that it looks to start the Earn and Learn in the Fall of 2023.

Barbara then turned the meeting over to Chris George. Chris stated that the CIS department instructors went online to look up the skills, knowledge, and abilities that companies were saying were needed for the various CIS jobs available. He stated that they made comprehensive list of those KSA's and sent to the committee to be voted one. He stated that once the votes came back, they weeded out the skills that were extremely low – meaning they were not wanted nor needed by really anyone in the industry – then took the rest and compared the existing curriculum to the list of skills to see where our programs aligned with the needs and where our programs were lacking. Delane McUne stated that this

CIS Advisory Committee Meeting Minutes – 10/13/2022

list also does not include the skills that the committee voted very high importance that the college is already covering. She stated that this list they are seeing now is more the skills voted somewhere in the middle that we just really aren't sure about and need to get more feedback from the leadership council about how important the skills might be in the workplace.

Chris then started with the list of skills that needed discussion.

"Discuss issues or concerns with vendor representatives" – voted 2.9 – Chris stated that the CIS instructors felt like the students weren't really exposed to this during the curriculum and asked if this something that the students should be exposed to. It was discussed that entry level staff would really not be handling vendor trouble tickets. The entry level staff would be exposed to it if they had to sit close with the troubleshooting help desk, but would not be the ones talking directly to the vendors.

"Integrating field notes in a technical drawing" – voted 2.8 – Karen Boatman stated that there was a lot of previous discussion about the need for diagramming. She stated that entry level wouldn't necessarily be doing the diagramming, but they might be handed a diagram and expected to know how to read it, so if the curriculum needs to cover it more, that's what she wants to know from the council. Chris Michaels that while entry level may not necessarily need to know every detail of network mapping, they did need to know how to read the documentation and understand what was done. It was stated that if there is only one person that handles all of that and no one else really understands it, what happens if that one person is not available when a question arises. Others need to know and understand the mapping.

"Write documentation for software applications and computer operations" – voted 2.3 – Chris stated that the same thought process applies here – what good is it if the students can't read it and understand it. Karen stated that it is covered a lot in the program, but the BLC voted it so low, and they are curious as to why it was voted so low. Chris Michaels stated that documentation is so important from the ground up, because as a process is built and added upon, it's important to have the documentation of what was done so that later on when updates need to be made, it's documented how they got to this point.

"Install communicating line switching devices" – Chris George stated that some of these do somewhat overlap each other. Chris stated that it could be either way – would you have an entry level person racking and stacking, or racking and stacking and configuring what they have set up? Chris Michaels that he would have them do both. Others agreed, stating that if you can't configure it, you shouldn't be working with it!

"Installing communication line cables" – Chris George stated that the students are exposed to it in some areas, and they are taught more about it in the Cisco area, but do they need to know how to punch a hole in the wall and set it up. Chris Michaels stated that the network administrators are trained to know what to look for, but they will complete a work order for someone else to do the work if needed. Delane asked if they would have the entry level doing a punch-down process. Chris said no – be aware of it, yet, but doing it directly, no.

"Diagnose computer problems" – Chris George stated that students are exposed to it, but they aren't fully exposed to it, and asked if that was something we needed to focus more on. Rich Gagnon stated that he thought it would be more an IT helpdesk area, and not an entry level. Charlotte Lewis stated that one thing that's not happening in software development classes is students are not given challenges and asked to figure out how it's broken. She stated that they can code easily enough, but if there is a problem, they can't figure it out. Chris Michaels added especially if it's someone else's code! He stated that when it's a code they have written themselves, it's easier to figure out what's wrong, but

CIS Advisory Committee Meeting Minutes – 10/13/2022

when someone else wrote the code, it's not as easy to diagnose. He stated that it goes back to documentation and making sure that each step is documented.

"Test computer software or systems" – Chris George stated that they thought of it more as auditing systems maybe and would entry level be auditing. Delane stated that there are 5 different classes where this is taught thoroughly, and asked if maybe that was too much and needed to be pulled back some. Rich Gagnon reminded the group that there was some discussion about it last meeting because it was being perceived in two different ways – half of the room perceived it as trouble shooting and half of the room perceived it as rolling out a new program or software. He stated that half of the room said they would not have a junior level person rolling out new systems, but the other half of the room stated that they will need to be able to troubleshoot these issues. Delane stated that they bring it back to discussion because it was voted so low, but they are covering it a lot, and do they need to cover less? Chris Michaels stated that he felt it was more of a life cycle kind of thing – that it would be something they would need to use when implementing a new system, when troubleshooting, when taking it out, but would also be used all through the process.

"Value computer usability or feature requests from users" – Chris George stated that there is one area where it is thoroughly taught, but is that enough? Delane stated that it was voted at 3.4, but they couldn't really think of another place to put it, and she wondered if Earn and Learn might be a place where they can get that exposure. Charlotte Lewis stated that she wouldn't pull her new people just for support. She stated that she would put them in customer facing with a mentor, but she stated that it's not usually industry standard – new people are usually somewhat hidden way. Rich Gagnon stated that they do the same thing and rotate new people into Projects for that very purpose.

"Evaluate new and emerging prototype software systems" – Chris stated that they expose them to it, but should it be covered more? Delane stated that a research project would be the best way to get the students experience, but would that be something would need to be created in the curriculum, or would that something that would be assigned during the Earn and Learn by the business? Chris George stated that he doesn't really have a lot of research projects that he can use, so it's hard. Charlotte Lewis stated that she didn't really see a need for that as long as they are at least exposed to some of the new technologies. Tiffany Lafleur stated that there is a technical writing piece that is missing. She stated she didn't realize how much writing would be involved. Delane asked if a technical writing course was something that should be implemented. Karen also asked if maybe they could switch technical writing with the English Comp 1 that is required. Delane did stated that Comp 1 is a prerequisite course for technical writing, so a technical writing class would have to be added separately. Chris George stated that the state put down new mandates that all associate's degrees had to be 60 hours, so the CIS program that was at 72 hours had to cut some of the classes and technical writing was one of them. Charlotte suggested that maybe within the framework of a course already offered, give the students a template of the technical writing and have them write something similar using the template. Tiffany agreed and stated that for her, technical writing is something that is learned over the course of a long time with a lot of practice.

"Developing maintenance schedules" – Chris George stated that CIS only exposes the students 5 times to maintenance schedules, and is that something that needs more exposure. Rich Gagnon said that they aren't really creating them at that level – they use them and follow them, but they have already been created.

"Write computer programs or code" – Chris George stated that this is the IT and Cyber Security side, and they do not have a focus on any programming languages. Delane added that they are exposing it to the students 5 times throughout the course, but since the vote was so low, are they maybe using it too much. Charlotte stated that scripting is essential to almost anything. She stated that they used to do manual patching, and it would take so long to complete. She said

CIS Advisory Committee Meeting Minutes – 10/13/2022

they would bring in other that could automate it and it went so much faster. Rich Gagnon stated that he doesn't typically expect it when a new person comes in, but if they do know how to do it, their value immediately goes up. Charlotte stated that it's an immediate benefit for the employer if a scripter can save time and resources by scripting the process instead of multiple people doing it manually.

"Train others in computer software use" – Chris George stated that this would more like end user training, and is this something that they would need to learn through us, or would this be something that they would more likely learn on the job and in the field? Charlotte stated that she does have her new people going through training, but she wouldn't expect it of someone new. Rich stated that they do in-house training, as well, by putting new people on the phones with a mentor to help them through for the first several days. Chris George stated that it was voted low, but they were thinking that maybe if a new employee was put at a level one help desk, do they need to know this? Rich stated that even in that case, basic communication skills are more important.

"Total Quality Management and Continuous improvement principles" – Chris George stated that they went through all of their courses, and we don't really offer it at all. He stated that it was voted a bit high, so is it something that we need to expose them to more. Chris stated that they thought maybe Idle Foundations or SigSigma – any of those? Charlotte and Tiffany both agreed that all of that would be important. Chris stated that it really gave the CIS group a lot of visibility to really look at the curriculum and realize how much was being taught over an 8 or even 16 week period and what they could move around to different areas.

"Knowledge of Voice Over IP" – Chris stated that we expose the students, but there is no longer a dedicated class. Tiffany stated that she didn't think so. She stated that there are so many different phone systems out there, that teaching them just one probably wouldn't serve the students in the best way. Chris and Karen spoke about another BLC member that wasn't present stating that she was a Networking person, and she would probably see a different perspective on it.

"AWS Cloud" – Chris stated that we currently teach AWS Academy, but the council had suggested that more Azure needed to be taught than AWS. Jeff Stoughton stated that they just recently had that discussion of adding Cloud Plus to one of their classes. Chris George asked if Certifications were important to the BLC? Some said yes, but Charlotte said that Pantex really doesn't care. It's more about a general exposure to more than one system. She stated that Pantex is more Azure based and isn't on the cloud yet, so a general exposure is more important than a full knowledge of Cloud. Chris Michaels agreed that a general exposure is more important, and a knowledge that civilian companies may have a lot more information on the cloud, whereas a government entity likely won't is a good thing to understand.

"Computer systems diagnostics software" – voted 3.0 – Chris George stated that this was pretty much discussed already, but should it be discussed more. He stated that there is some exposure to it, but is it enough. No one really commented, but Chris acknowledged that the BLC thought it was sufficient and moved on.

"Exchange Server" – voted 3.3 – He stated that we don't really teach a whole class on Exchange, but they are exposed to it and can work a project on it if they want to. He asked if it needed to be more exposed. The BLC agreed not really.

"PowerShell" – Chris stated that the students are exposed, but they aren't going into it a lot. Delane stated that we aren't really letting them go deep into it, but rather the instructors are telling them what to do it. Charlotte stated that she thought it was important to know Powershell. Chris Michaels stated that he felt it was more specific to certain applications, but not industry standard. Charlotte stated that as long as we are teaching them how to use scripting

CIS Advisory Committee Meeting Minutes – 10/13/2022

automation, that is more important. Charlotte stated that it doesn't have to be intense, but a general exposure and maybe a project or two would be good. Tiffany stated that a Programming Logic class might be better than PowerShell specific. Chris Michaels stated that it was more about knowing how to do the automation, not necessarily a specific program to do that.

"Network Cabling Tools" – voted 3.4 – Chris stated that they are taught what the tools are and how to use them. He stated that they are exposed to all of the fiber types in the Networks class, but they do not test anything with a tester. Chris Michaels stated that they need to at least learn what the types of cables are and how to use them properly because the fibers are not all the same and don't always work going both ways.

"Virtualization Software" voted 2.8 – Chris stated that they are exposed to it and taught a bit how to use it, but there isn't a dedicated class. Chris Michaels stated that he felt a whole class wasn't needed, but to encourage the students to sandbox it at home.

This was the end of the KSA review. Delane asked Hope Cotner if there was anything else that needed to be covered? Hope stated that it was covered well and thanked the BLC for their discussion.

Delane referred to the agenda and asked about a when a future meeting should occur. She stated that the curriculum committee typically gets together in February, and they would like to try to do something. She stated that we'd really like to have some more folks on the BLC, stating that there aren't really any Cyber Security folks on the BLC. She stated that a meeting in February would bring new people in with the current people. She also stated that a larger meeting in March would be another round of voting and discussing KSAs, and that would be an annual process to make sure that the program is staying current. Delane confirmed that the first meeting in February would be to let everybody know what changes have been implemented, and then to move to the new KSA list. Karen stated that the biggest issue they have is that any curriculum changes that are approved by the curriculum committee would not go into effect until the following Fall term, so any changes they present now would not be effective until Fall 2023.

Charlotte Lewis asked if she could get some more information about the program itself – how many students, etc. Delane stated that right now the program is really growing. She stated that there are multiple certifications that we teach towards because we know that some many of the certs will help students to get in the door. Delane stated that we also have a Programming and Coding side of the program that will have a separate BLC group, and asked that current members help with growing the BLC for both sides of the program.

There was a discussion about what time the meetings should occur. Karen stated that some of the small businesses just don't have the manpower to leave during the day for a meeting, so would a late afternoon/early evening meeting be a possibility to fit into everybody's schedules. Charlotte Lewis stated that it's easier for them to do either really early morning or late day because Pantex is so far away, it's hard to drive all the way out there, come back for a meeting, then back to the site. The discussion about the best time and date of the week continued.

Charlotte Lewis asked if our program would funnel into a Bachelor's degree, stating that most of their entry level positions require the Bachelor's. Delane explained that our degree is an AAS degree – explaining that degree does not have the same core requirements as an AS degree, so our degrees may not transfer completely to a 4-year college.

Delane began to wrap up the meeting, telling the council to expect to hear from us about Earn and Learn, regarding the new meetings in February and March, and asked the council to please get names of people to join either council. Karen

CIS Advisory Committee Meeting Minutes – 10/13/2022

	<p>asked to confirm if Tuesday evenings were okay for the group, so they can know better when to schedule the next meeting. Rich Gagnon stated that he has a meeting each Tuesday after City Council meets, so that Tuesday each month, he wouldn't be able to come.</p> <p>Delane thanked the group and dismissed the meeting.</p>		
Other:	The meeting was adjourned at 2:57PM.		
Recorder Signature: <i>Kathy Savenport</i>		Date: 10/18/2022	Next Meeting: To be determined