



NETWORK TECHNOLOGY ADVISORY COMMITTEE - MINUTES

Tuesday, May 24th, 2022 * 3:00-4:30pm

Zoom Online

Members Present: Brian MacKay (Committee Chair), The Columbian Publishing Co.; Eric Olmsted (Vice Chair), On Line Support; Steve Bohling, Clark PUD; Eric Cowen, Columbia Machine; Ryan Fanning, BPA; Michael Jaeger, Open to Industry; Sean Moore, Workforce; Patrick Rancore; Windstream; Jim Schafer, Intel

Members Absent: Eric Hazen, ieSolutions; Brian Page, Fortinet; Steve Redman, EHFNET.WORKS

Clark College: Dwight Hughes, Network Technology Department Head; Armetta Burney, Interim Dean – WPTE; Michael Tucker, Professor; April Cannon, Advising; SueAnn McWatters, Advisory Committees Coordinator

MINUTES OF THE PREVIOUS MEETING

The minutes of October were reviewed: changes that need to happen include:

- Date was wrong (listed 5.24.22), corrected to December 7th, 2021
- Why is motion from Ryan red?

Approved amended.

NEXT MEETING DATE

The committee will meet next on October 11th, 2022 @3:30pm.

REPORT OUT ON CYBERSECURITY DEGREE

NEW PROGRAM NAVIGATOR

Received a state grant to fund a permanent position dedicated to this program. This will fund the position that is focused on retention. This position will work with all NTEC and CBAS students. From first to last term, they will assist with onboarding, navigating, resource for situations like failing a class, assist with internship placement, work with employers to find employment. They will also participate in recruitment, though the primary focus is current students. This position will meet with Dwight each week.

NEW SECOND PROFESSOR FOR CBAS

There will be a second tenure track position for this program. The cohorts are filling and expanding this position will allow for a third cohort to start. This will help with retention as if a student fails a course, they had to wait 12 months; whereas now they can retake it a second term to help with retention. This will also assist the current faculty member to keep curriculum up.

GRANT FOR CYBER RANGE

Received a \$36,000 grant for equipment to be able to run capture the flag events. This funding covers the purchase of hardware but funds are still needed to develop the tougher pieces. While building this may cost upwards of half million, the investment is necessary as the cost to rent a space is \$5,000 per student. Another drawback to rentals is that it is pre-created and does not allow for customizations to align with course and program material.

APPLYING FOR CAE DESIGNATION

Dwight is in Dayton, OH working on application for CAE designation. Part of this is having an advisory committee for the CBAS. The committee's first meeting is October 4th, 2022. The hope is to have 8 to 9 members, so please reach out to Michael Tucker for any individuals who might be interested to serve.

NETWORK TECHNOLOGY DEGREE STACKABLE CERTS/COURSES

Network Technology program needs are diminishing as employers are not requiring degrees and students are not completing them. The NTEC program has seen a significant reduction in new student enrollment. While many have gone to the CBAS, many others are simply not enrolling. The trend has been more toward short term training focused on skills needed now or in the near future. Focusing on certification is more equitable, as it allows for a faster turn around from education to employment with minimal interruption to their current responsibilities. Looking into digital badging for students. These are designed to recognize, not necessarily leading directly to employment. These badges are created by the department and can be rewarded as an incentive. It wouldn't be required, but it would be a way to acknowledge new skills students have demonstrated.

There are currently two short term certifications Microsoft and Cisco Technician. Other certifications do not need to have as many courses as these, but it is an example. Discussion included:

- Do any courses correlate to SC 200, MS 100 or 700 certification. No, they have been untethered. Microsoft has gotten rid of their server certification as a core and are more focused on the cloud, but the program still teaches them at the advise of the committee.
 - Continuing to offer these courses is becoming more difficult as, without an industry certification, it becomes harder to locate textbooks and other resources.
 - MS 100 certification is needed to keep Microsoft Gold Certification (MS 100 is higher than 700 in terms of hierarchy).
- Coursework can be adaptable from a few credits to many, based on the need of the students. For example, the three credit is coupled with a five-credit course that builds upon the fundamentals of the first course.
- One of the outcomes from this would be able to take someone who is already working and is seeking enough education to assist in promotion or expansion of a new/updated skill. Ideally,

they would be looking at two or three courses packaged together to provide them what they need.

- Google curriculum was not historically of interest to the committee.
- Microsoft Azure or Amazon Cloud: Eric Olmstead shared a link of certifications that they support. Small businesses are not replacing servers, they are moving online appears to be the current trend, but long term this may not be the continuing trend based on historical practices in the industry. Larger companies appear to be leaning toward Amazon; whereas smaller businesses are more likely to rely on Microsoft. In this area, the majority appear more favorable toward Microsoft. Clark college has hired an external researcher to look at creating a Cloud Degree, and if approved would probably take 3 to 4 years.
- Are there courses already being offered, such as the Linux courses, that could be packaged together? There could be a class in An syble, or put it in a red-at. a course on cloud automation. There could be a class in Linux that included this or as a standalone. Currently only teaching server admin but there is a cloud course. There are several SSH software packages in Linux that allow for remote configuration of multiple devices over SSH.
- Program is both redhat, Microsoft, and VM academy that grants students access to additional information and resources.

ROUNDTABLE DISCUSSION

What does the program need to be focused on what it needs to be for the future both challenges and opportunities.

- Web 3.0 is not going anywhere right now.
- Cloud is a new opportunity, and the program currently only offers one course.
- Automation packaging to be able to one thing to 30 or 100 endpoints. Having someone come in with this skillset would be very helpful.
- Teaching businesses by helping them understand the journey of cybersecurity. This isn't just teaching students for a degree, but also help businesses identify where they have gaps and what solutions are out there to resolve it. This would be more challenging, but doable and would allow students to be taught how to identify and solve gaps as well.
- The AA level degree only has one security course, perhaps expanding the offerings at the AA level. This could include threat analysis and incident response.
- Wireless architecture, site survey controllers and things of that nature. There has been a push to outsource this work as well as often very proprietary with regards to management. There are also variances in hardware versus software controllers, again with many smaller businesses opting for cloud managed wireless solutions. Currently, Clark uses Ruckus. There is cloud based like Meraki.
- Adding more or making less online courses are an individualized decision. In person does assist with retention as well as nonverbal cues are more likely missed in zoom. Face to Face classes keep struggling to run due to low enrollment.
- Running a Gopro channel that is set up during class time in addition to zoom has been innovative and the program is putting aside \$40,000 to set up on main campus.
- Enrollment trends based on a 10 year study indicate this downward is going to trend. How is the program engaging with CTE directors specific to technology and what are the emerging talents in both hardware and software ideas. The NTEC program is hiring a full-time staff person that does recruitment parttime, meeting with directors and making High School presentations. They will also work with faculty development events for CTE faculty. Many students are coming

from ITECH where they are already doing many of these courses in running start, which is a barrier due to scheduling. The program is trying to work with the students to adjust scheduling needs to assist the students to complete at least some of the coursework and encourage them to come back to complete. Summer courses are appealing to students who have recently graduated and are looking for a bridge until fall courses for BAS begin.

- Consider getting highest level of administration in k-12 school district and Clark President to build a relationship to align with direct flow between the two education systems.
- Virtual tours where someone goes to the site and wear technology that allows them to live stream the visit including interacting with everyone via headset. This reduces travel time and increases access for high school and college students.

prepared by Sara Seyller